

THE MINER'S GUIDE

TO THE LAW RELATING TO COAL MINES

BY

HIS HONOUR JUDGE

L. A. ATHERLEY JONES, K.C.

RECORDER OF NEWCASTLE-UPON-TYNE

AND

HUGH H. L. BELLOT, M.A., D.C.L.

OF TRINITY COLLEGE, OXFORD

AND OF THE INNER TEMPLE AND MIDLAND CIRCUIT

BARRISTER-AT-LAW

THIRD EDITION, REVISED AND ENLARGED

METHUEN & CO. LTD.

36 ESSEX STREET W.C.

LONDON

First Published
Second Edition, Revised and Enlarged
Third Edition, Revised and Enlarged

February 1904
May 1910
July 1914

DEDICATED
TO THE COAL MINERS OF
GREAT BRITAIN

PREFACE

SINCE the publication of the last edition of this work so many changes have taken place in the law relating to coal mines that the book has been entirely re-written. The bulk of the provisions contained in the Coal Mines Regulation Acts, 1887 to 1910, have been embodied in the codifying Act of 1911, which is now the principal Act. Unfortunately some sections of the Act of 1887—the Coal Mines Regulation Act, 1908; the Truck Acts, 1831 to 1896; and the Weights and Measures Acts, 1878 to 1905—have not been incorporated. All these statutes are embodied in the Digest of the Coal Mines Regulation Acts in this book, together with all decisions of the courts and references to the relevant Statutory Rules and Orders. Some of the latter are contained in the Digest, the remainder, printed in full, follow the Digest. The authors also deal with the Coal Mines Regulation Act, 1908, and the Coal Mines (Minimum Wage) Act, 1912, in a similar manner to that of the Digest.

So great has been the increase in the material relating to this subject that the authors have been compelled to abandon Part II of the former editions, dealing with the

Law of Employers and Workmen, and to confine themselves entirely to that relating more peculiarly to coal mining.

It is believed that in its present form this treatise will be found even more convenient as a source of reference to those engaged in this pursuit, both to employers and to employed, than the previous editions.

The Explosives in Coal Mines Order of the 13th May 1914, has appeared too late to be inserted in full, but the complete list of Permitted Explosives will be found in the Appendix.

We desire to express our thanks to Messrs. Eyre & Spottiswoode, who generously allowed use to be made of their Index to the Coal Mines Act, 1911, in the preparation of the *Index* to this book.

4 PAPER BUILDINGS

INNER TEMPLE, E.C

June, 1914

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THE MINER'S GUIDE

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DIGEST OF THE

COAL MINES REGULATION ACTS, 1887 to 1911

THE COAL MINES (MINIMUM WAGE) ACT, 1912

THE TRUCK ACTS, 1831 to 1896, and

THE WEIGHTS AND MEASURES ACTS, 1878 to 1905

THESE Acts of Parliament constitute a code of law whereby the management and discipline of coal mines are governed. The authors' object has been to compile a digest of those provisions especially affecting the relations of employer and employed, owner, manager, agent, or miner

The Act of 1887, almost the whole of which is now repealed, was mainly a statute consolidating the principal Act of 1872, the amending Act of 1886, and the Stratified Ironstone Mines (Gunpowder) Act of 1881. It contained, however, certain important alterations and additions, which were largely due to the laborious and valuable investigations of the Royal Commission on Accidents in Mines.

This Commission sat for a period of six years, having commenced its labours in 1879. A large proportion of its inquiries were directed to the ascertainment of the causes of those disastrous explosions which form so sad a feature in the annals of the mining industry. The Act, following

the suggestions of the Commissioners, enjoins greater precautions in the use of explosives. The danger of coal dust, as causing with the aid of a small proportion of gas—or indeed, as some contend, by itself producing—an explosion, has at length been generally recognized both by experts and practical miners. The Act accordingly required that coal-dust should, prior to firing a shot, be treated with water, or some other process employed to render it innocuous. The Royal Commissioners made most exhaustive investigations by experiment and otherwise into the comparative value of the various safety lamps which had been invented. The Act, upon the advice of the Commissioners, did not prescribe any particular lamp, but required that those only should be used which could be safely carried against the ordinary air-current prevailing where they may be used. By the Act of 1896, also now repealed, it was expressly assumed that the lamps were to be provided by the owner, which was some guarantee that they would prove satisfactory. By the Act of 1911, however, no lamps are to be used except those provided by the owner, and the latter may now only supply those approved by the Secretary of State. Greater strictness in inspection, more convenient distribution of timber, increased care in winding—these constitute the more important changes in the law resulting from recent legislation, prior to the Act of 1911.

In spite of these improvements in the conduct of the mining industry the figures for fatal accidents and personal injuries continued to rise proportionately with the increasing number engaged. From 1903 to 1907 the fatal accident rate was 1.29 per 1000. From 1908 to 1912 it was 1.36 per 1000.

The improvements added by the Act of 1911, largely due to the recommendation of the Royal Commission on Mines of 1909, are of the greatest value and importance,

and have materially increased the safety of those engaged in mining. But it is contended that the use of electricity in mines is responsible for the appalling disasters which have occurred within recent years, inflicting the most terrible loss of life. The representatives of the mining federations in the House of Commons fought in the Committee of 1910 and 1911 for the exclusion of electricity from the mines, asserting that before its introduction those disasters did not take place. And since this country had become the greatest coal-producing country per head of the population in the world before the introduction of electricity, there was no industrial reason for the use of electricity in mines.

On the other hand experts differed widely upon the effects of employing electricity in mines, and accordingly its use was, by the Act of 1911, prohibited in mines where, on account of risk of explosion of gas or coal-dust, its use would be dangerous to life. If in use the inspector of the division may call upon the owner to desist pending an inquiry.¹

The Coal Mines Act of 1911 is, like the Act of 1887, both a consolidating and amending Act, it supersedes and repeals the Coal Mines Regulation Acts of 1887, 1896, and 1903, and also repeals, wholly or in part, so far as they relate to coal mines, the Mines (prohibition of child labour underground) Act, 1900, the Notice of Accidents Act, 1906, the Employment of Women Act, 1907, the Mines Accident (Rescue and Aid) Act, 1910. It should, however, be observed that the Act of 1887 is kept alive for the purpose only of sections 1 and 3 and sections 12, 13, 14, and 15, a highly inconvenient provision which involves the necessity of referring to an otherwise obsolete Act for the purpose of ascertaining matters which might well have been comprehended in the repealing and amending Act.

Sections 1 and 3 of the Coal Mines Regulation Act of 1887 are unrepealed, as above stated, but that is obviously only for

¹ See Reports on Explosion at Senghenydd Colliery, Parl. Pap. 1914, Cd. 7346.

the purpose of rendering effective sections 12, 13,^a 14, and 15, also unrepealed, of the same Act. Sections 1 and 3 are re-enacted in almost precisely identical words in sections 1 and 127 of the present Act.

It should be observed that to mines other than those defined in section 1, the Metalliferous Mines Regulation Acts apply, and if in any case doubts arise as to whether they do apply, the decision rests with the Secretary of State (see section 113, *post*, p. 184).

APPLICATION OF ACT

1. *Application of Act.*—The mines to which this Act applies are mines of coal, mines of stratified ironstone, mines of shale, and mines of fire-clay; and in this Act the expression “mine,” unless the context otherwise requires, means a mine to which this Act applies.

This section repeats section 2 of the Act of 1887, which is still in force.

Mine.—For the definition of “mine,” see section 122, p. 194. The express exclusion of premises used for any manufacturing process is new.

PART I

MANAGEMENT

MANAGERS

2. *Appointment of manager of mine.*—(1) Every mine shall be under one manager, who shall be responsible for the control, management, and direction of the mine, and the owner or agent of every mine shall appoint himself or some other person to be the manager of such mine.

(2) If any mine is worked without there being such a manager for the mine as is required by this section, the owner and agent shall each be guilty of an offence against this Act:

Provided that, if the person appointed to be manager

of a mine, by reason of death, resignation, or otherwise, ceases to be manager, nothing in this section shall prevent the mine being worked (for a period not exceeding four months) until a new manager is appointed, if in the meantime a competent person holding a first-class or second-class certificate of competency under this Act is temporarily appointed to perform the duties and exercise the powers of manager.

(3) A small mine shall be exempt from the provisions of this section, unless the inspector of the division, by notice in writing served on the owner or agent of the mine, requires that it be under the control of a manager, and in any mine so exempt in which a manager has not been appointed the powers and duties conferred or imposed on the manager shall be exercised and performed by the owner or agent, and anything by or under this Act required to be done by or to the manager shall be done by or to the owner or agent.

(4) The owner or agent of a mine required to be under the control of a manager shall not take any part in the technical management of the mine unless he is qualified to be a manager.

(5) For the purpose of this section, workings having a common system of ventilation or any part of a system of ventilation in common shall be deemed to form part of the same mine

This section is in substitution for section 20 of the Act of 1887.

Owner.—For definition, see section 122, pp. 195, 197.

Agent is defined by section 122, p. 196.

Manager—Every mine must have one manager only, who must be at least twenty-five years old, and for the time being registered as the holder of a first-class certificate (see section 5). No one may act as manager of more than one mine

without first obtaining the approval of the inspector of the division subject to the limitations of section 4 of the Act.

No working may take place unless a manager has been appointed.

Statutory duty.—Subject to the proviso in subsection 2 the criminal liability of the owner and agent under subsection 2 is absolute. The civil liability of the owner is also absolute, and it is difficult to conceive circumstances under which he could successfully claim the protection of section 102 (8), p. 174.

Certificates.—The provisions relating to certificates of competency are contained in sections 7 to 13 inclusive (see pp. 10-24).

Small mines.—By section 122 this means a mine in which the total number of persons employed below ground does not exceed thirty.

Technical management.—This expression is not defined in the Act. It would appear to mean such matters as a certificated manager is alone qualified to superintend.

Duties of manager.—Regulations relating to the duties of the manager are contained in sections 1 to 40 of the general regulations dated 10 July, 1913,¹ pp. 216-22.

3. *Daily supervision of mine by manager or under-manager.*—(1) In every mine required to be under the control of a manager, daily personal supervision shall be exercised by the manager, and, where an under-manager has been appointed by the owner or agent of the mine, also by that under-manager.

(2) In cases where, on account of the absence of the manager or under-manager on leave or from sickness or any other temporary cause, such daily personal supervision as is required by this section cannot be exercised, arrangements shall be made for the duties of the manager or under-manager, as the case may be, in respect of daily personal supervision being performed—

(a) in the absence of the manager, by the under-

¹ Statutory Rules and Orders, 1913, No. 748.

manager, if any, or by a person not under the age of twenty-five years and holding a first or second-class certificate of competency under this Act, appointed in writing by the owner or agent ;

- (b) in the absence of the under-manager, in the case of a mine for which a separate under-manager is required by this Act to be appointed, by a person not under the age of twenty-five years and holding a first or second-class certificate of competency under this Act appointed as aforesaid

And any person performing the duties of a manager or under-manager, whether under this or under the last preceding section, shall have the same responsibility, and shall be subject to the same liability, as the person whose duties he is performing

(3) If in any mine there is a contravention of or non-compliance with the provisions of this section, the mine shall be deemed to be not managed in conformity with this Act.

This section, so far as it is not entirely new, re-enacts section 21 (1) of the Act of 1887.

Daily supervision.—When the manager failed to exercise daily supervision and this was known to be acquiesced in by the owner, the latter would appear to be liable as well as the manager (*Evans v. Small*, 2 T.L.R. 139 [1885]).

Certificate of competency —See sections 7 to 13, pp. 10-24.

Not managed in conformity.—When a mine is not managed in conformity with the Act, the owner, agent, and manager are each guilty of an offence, and liable to a fine not exceeding £20 ; and if the offence was likely to endanger safety or to cause serious personal injury or a dangerous accident and was committed wilfully or negligently, to imprisonment, with or without hard labour, not exceeding three months (see section 101, p. 171).

Statutory duty.—The criminal liability of the owner, agent, and manager is limited by the provisions of section 102 (1) and (3), and the civil liability of the owner by section 102 (8), p. 172. As to whether the duty is absolute or qualified, see section 75 n., p. 112.

4. *Limitation of number of mines for which manager may act.*—(1) After the first day of January nineteen hundred and thirteen, no person who is the manager of a mine shall, without the approval of the inspector of the division, be the manager of any other mine required to be under the control of a manager, if the aggregate number of persons employed underground in the mine of which he is manager and that other mine exceeds one thousand, or if all the shafts or adits for the time being in use in working the mine of which he is manager and that other mine do not lie within a circle having a radius not exceeding two miles.

(2) Where any person is appointed to be the manager of two or more mines required to be under the control of a manager, a separate under-manager shall be appointed for each mine.

(3) If it appears to the Secretary of State that the personal supervision and control exercised by the manager of any mine are insufficient, by reason of the person who is manager of that mine being also manager of any one or more other mines, the Secretary of State may by order limit the number of such mines for which a person may act as manager.

If the owner, agent, or manager of the mine disputes the reasonableness of the order, the matter shall be settled in manner provided by this Act for settling disputes.

(4) If any person acts in contravention of any such order, or connives at any such contravention, he shall be guilty of an offence against this Act.

This section is entirely new.

Settlement of disputes.—The mode in which disputes under this section are to be settled is provided by section 116, p. 185.

5. *Qualifications of managers and under-managers.*—(1) A person shall not be qualified to be appointed or to be manager of a mine required to be under the control of a manager, unless he is at least twenty-five years of age and is for the time being registered as the holder of a first-class certificate of competency under this Act.

(2) A person shall not be qualified to be appointed or to be an under-manager of a mine, or manager of a mine which is not required to be under the control of a manager, unless he is for the time being registered as the holder of a first-class or a second-class certificate of competency under this Act.

This section is in substitution for section 20 (2) and section 21 (1) of the Act of 1887

Under-manager—Regulations relating to the duties of the under-manager are contained in rules 41 to 45 inclusive, and those relating to officials inferior to the under-manager but superior to firemen, examiners, or deputies are contained in rules 46 to 48 inclusive of the general regulations, dated 10 July, 1913,¹ pp. 223-4.

Mine.—A small mine is not within the provisions of this section (see section 2 (3), p. 5).

Existing manager.—By section 123 (a), p. 197, a manager, if he were lawfully so acting at the date of the passing of the Act, is exempt from the provisions of this section.

6. *Notification of name and address of manager, etc.*—On the appointment in pursuance of this Act of a person to be manager or under-manager of a mine, or to perform temporarily the duties of manager or under-manager, the owner or agent shall send to the inspector of the division notice of the name and address of that person and the number and class of the certificate held by him,

¹ Statutory Rules and Orders, 1913, No. 748.

and, if he fails to do so, he shall be guilty of an offence under this Act.

This section enlarges the provisions as to notice in section 20 (1) of the Act of 1887.

Notice to Inspector.—By section 120, p. 194, notice must be in writing, and may be either served personally or sent by post.

Statutory duty.—The duty of the owner or agent is now absolute; and it is difficult to imagine circumstances in which they could claim the protection of section 102, p. 172 (see section 75 n., p. 112).

CERTIFICATES OF COMPETENCY

7. *Description of certificates of competency.*—There shall be two descriptions of certificates of competency under this Act (that is to say,)—

- (1) first-class certificates;
- (2) second-class certificates.

8. *Constitution of Board for Mining Examinations.*—(1) For the purpose of ascertaining the fitness of applicants for certificates of competency under this Act, a Board, to be styled “The Board for Mining Examinations,” shall be constituted by the Secretary of State, consisting of—

- (a) six representatives of owners or agents of mines or managers of mines or mining engineers;
- (b) six representatives of workmen employed in mines;
- (c) the chief inspector and two divisional inspectors of mines; and
- (d) two persons eminent in mining and scientific knowledge.

The members of the Board shall be appointed and may be removed by the Secretary of State, and shall hold office during his pleasure.

(2) The procedure of the Board shall be in accordance with rules made by the Board subject to the approval of the Secretary of State.

(3) The Board shall, at such intervals as the Secretary of State may determine, make to him a report of their proceedings and of such other matters as he may require.

Sections 7 and 8 are in substitution for section 23 of the Act of 1887. The provisions relating to the composition of the Board of Examiners amplify and enlarge those of section 23.

9. *Examinations for certificates.*—(1) The Board for Mining Examinations shall hold examinations at such times and in such places as may be fixed by the Board subject to the approval of the Secretary of State.

(2) The Board may, subject to the approval of the Secretary of State, make rules for the conduct of the examinations and the qualifications of applicants for certificates of competency under this Act, and the rules shall amongst other things provide—

(a) that the examination and qualifications of applicants for second-class certificates shall be suitable for practical working miners; and

(b) that no person shall be qualified to be an applicant for a certificate unless he—

(i) is twenty-three years of age or upwards; and

(ii) has had such practical experience in mining (either in the United Kingdom or partly in the United Kingdom and partly elsewhere) as may be required by the rules for a period of not less than five years, or (in the case of an applicant who has received an approved diploma, or has taken an approved degree) of not less than three years; and

(iii) has given satisfactory evidence of his sobriety, experience, and general good conduct ; and

(c) for the holding, as a part of the examination, of vivâ voce examinations in different localities with a view to the practical knowledge of applicants for certificates in each locality being tested with reference to the local mining conditions, and for requiring at least one of the Examiners in every vivâ voce examination to be a person possessing practical acquaintance with those conditions.

(3) The Board may, subject to the consent of the Secretary of State as to number, appoint, remove, and reappoint Examiners to conduct examinations.

(4) A person acting as Examiner shall not take any part in the examination of the papers, or in the vivâ voce examination, of any applicant for a certificate whom he has in any way trained or instructed in any of the subjects of the examination.

(5) The remuneration to be paid to the Examiners and the fees to be paid by applicants for certificates shall be such as the Secretary of State, with the consent of the Treasury, may determine.

(6) For the purposes of this section, "approved diploma" means a diploma in scientific and mining training after a course of study of at least two years at an institution approved by the Secretary of State, and "approved degree" means a degree of any University approved by the Secretary of State which involves training in and knowledge of scientific and mining subjects ; and the approval of the Secretary of State may be given subject to such conditions as he may think fit, and may be revoked by him at any time.

This section is in substitution for sections 23 (1), 24 (2), 25, 26 (1), and Schedule 1 of the Act of 1887, and section 1 of the Coal Mines Regulations Act (1887), Amendment Act, 1903.

Examinations.—By an Order made by the Board and approved by the Secretary of State, 1 August, 1912,¹ under subsection 1, the following times and places for holding examinations have been fixed :

(1) Two examinations shall be held in each year, commencing on Tuesday in the last complete week of May and in the last complete week of November respectively

(2) Each examination shall be held simultaneously at the following centres :

District.	Centre of Examination.
1. Scotland	Edinburgh.
2. Northumberland, Durham, Yorkshire (N. Riding), Cumberland and Westmorland	Newcastle.
3. York and North Midland	Sheffield.
4. Lancashire, North Wales, Cheshire, and Ireland	Wigan.
5. South Wales and Monmouth	Cardiff.
6. Midland and Southern	Birmingham.

Conduct of Examinations.—The following rules for the conduct of examinations, made by the Board under subsection 2, were approved by the Secretary of State 1 August, 1912² :

(1) One of the Central Examiners, and at least one Local Examiner possessing practical acquaintance with the local mining conditions, shall be in attendance at each examination centre. The Central Examiner shall take the chief control of the examination, and subject to the regulations of the Board, the Local Examiner or Examiners shall act in accordance with the instructions of the Central Examiner.

The Local Examiners shall not concern themselves in any way with the written part of the examination, but shall assist the Central Examiners in carrying out the vivâ voce examination of candidates.

(2) Invigilators shall be appointed for each examination not exceeding one for every 50 candidates, who shall act under

¹ S. R. and O., 1912, No. 1149.

² *Id.*, No. 1150; 1914, No. 402.

the orders of the Central Examiner and assist him in maintaining discipline and in distributing the questions and collecting the examination papers.

(3) Examiners shall see that the walls of the room are cleared of all possible aids to the candidates under examination.

(4) All stationery, etc., required for the purpose of the examination shall be obtained by the Secretary to the Board and supplied to the Examiners. All surplus stationery must be returned to the Secretary to the Board at the close of the examination.

Each candidate shall be provided with pens, ink, and blotting paper.

(5) The papers are to be set in the order indicated by a Time Table prepared jointly by the Central Examiners.

If from any cause the paper is not given out precisely at the scheduled time the candidates must be informed of the fact, and the exact time at which their work will be collected, and care must be taken that the exact full time is allowed from the moment at which the paper was given out. The time consumed in giving out and collecting papers must not be included in the "full time" allowed for any paper.

(A candidate who attends late shall not be allowed any extension of time on that account.)

(6) Before proceeding to his seat in the examination room a candidate must lay aside his hat, overcoat, umbrella, and any book, papers, or appliances, the use of which is not expressly allowed to him. The candidate shall be allowed to bring with him a drawing scale, slide rule, protractor, a pair of compasses, parallel rule, and set squares. Apart from such special articles, a candidate shall be at liberty to take to his place in the examination room such ordinary appliances as pens, ink, penknife, chalks, and indiarubber; but the Examiner may at his discretion prohibit the use of any such articles.

If a candidate comes late he shall be warned that his marks may be disallowed for that subject, but he shall not be excluded from the examination. A note of the circumstances must be made, and it must always be stated whether any other candidate has already left the room.

(7) The Examiner shall collect at the commencement of the examination from each candidate the Home Office authorization for appearing at the examination.

(8) The candidates shall be told not to begin work on a paper until they receive the signal to do so.

(9) The Examiner must take every precaution that no candidate receives any improper assistance either from books or papers or from any other candidate. He must insist upon perfect silence in the examination room, check all disorderly or improper conduct in or about the room, enforce all the rules for the conduct of examinations and report to the Board any irregularity which may occur, or any shortcoming in the arrangements for the examination.

(10) No candidate shall be allowed to quit the examination room until the expiration of half an hour from the time fixed for the commencement of the paper on which he is engaged

A candidate who is obliged to leave the room through illness or other sufficient cause, and who wishes to return and continue work on the paper then in progress, shall leave the room in charge of an attendant, a note as to the circumstances shall be made and the page of the book on which the candidate was at work shall be endorsed—"The candidate left at this point."

In certain cases (e.g. oral and practical examinations) candidates may be required to remain in the room until the expiration of the time allotted to the subject. Candidates shall not, without the express permission of the Central Examiner, remove from the examination room any paper or other material supplied to them, other than the printed papers of questions, which the candidate may take away with him at the conclusion of the examination.

(11) A candidate who asks a question as to any ambiguity in the papers, shall be told to enter on his work any representation he may wish to make, but no further answer shall be given. The Examiner shall himself forward an independent report to the Board, stating the candidate's name and the general nature of the question. A candidate making a complaint of any other nature shall be directed to make his statement in writing, which shall, if the Examiner thinks necessary, be sent to the Board.

(12) Candidates shall be allowed, unless there is any special direction to the contrary, to keep their work in any subject until the expiration of the time allotted

Every book, plan, form, or separate sheet of paper used by

the candidate must have the candidate's correct name written upon it.

(13) All examination papers shall be forwarded in a sealed package to the Secretary to the Board, after they have been examined and the marks tabulated by the Examiners.

Qualifications of candidates.—The following rules, under subsection 2, made by the Board, as to the qualifications of candidates for first and second-class certificates, were approved by the Secretary of State 1 August, 1912.¹

1. A candidate must be at least 23 years of age and must produce testimonials, on the forms provided for the purpose, as to sobriety, experience, and general good conduct.

2. Candidates for first and second-class certificates must produce (1) a First Aid Certificate of the St. John Ambulance or the St. Andrew's Ambulance Association, or other Society or Body approved by the Secretary of State, and (2) a Fireman's Certificate as required under section 15 (1) (b) of the Coal Mines Act, 1911.

3. A candidate shall have had practical experience in mining for a period of not less than five years, or (in the case of a candidate who has received an approved diploma or taken an approved degree) of not less than three years; and the nature of the practical experience required of a candidate shall be experience gained in one or other of the following capacities in a mine under the Coal Mines Act, or partly such experience and partly experience gained in a Colonial or Foreign Mine which may be considered by the Board to be equivalent:—

(a) As fireman, deputy or examiner, or other underground official of the mine, or apprentice to a mining engineer. In the case of a mining apprentice the greater portion of the practical experience (i.e. of the five or three years, as the case may be) must have been gained either—

(1) in actual practical work (i.e. exclusive of the work of mine surveying) at the working face and other parts of the underground workings of the mine;

(2) in direct supervision of such work;

(3) or in both (1) and (2);

or (b) As an underground workman of a mine who has had

¹ Statutory Rules and Orders, 1912, No. 1151.

direct practical experience in the work of getting minerals, and of stone work, timbering, and repairing.

A candidate, part of whose practical experience has been gained in a Colonial or Foreign mine, must submit full particulars of such experience for the consideration of the Board.

A candidate for a first-class certificate must satisfy the Examiners in a knowledge of fiery mines.

4. A candidate for a first-class certificate must possess such a knowledge of arithmetic, mathematics, physics (including electricity), chemistry, geology, and engineering science as will enable him to answer properly questions on the subjects in the following syllabus :—

(a) FOR FIRST-CLASS CERTIFICATES

(i) *Winning and Working*.—Systems of laying out and working, under varying circumstances, of coal and other stratified deposits included under the Coal Mines Act. The geology of these deposits. Methods of supporting roof and sides. Boring and sinking. Blasting and general knowledge of explosives.

(ii) *Theory and Practice of Ventilation*.—The properties, identification, and practical estimation of gases met with in mines. Sources and effects of heat in mines. Natural ventilation, fans, and other ventilators. The distribution and control of the air underground. Construction, use, and testing of safety lamps.

(iii) *Explosions in Mines, Underground Fires and Inundations, their Causes and Prevention*.—Coal dust. Spontaneous heating. Rescue operations, apparatus and organization. Recovery of mines after explosions, fires, and inundations.

(iv) *Machinery*.—Winding, hauling, pumping, mechanical coal-cutting and conveyors, etc. Methods of transmission of power. Strength of materials.

(v) *Surveying, Levelling, and Drawing*.—Determination of magnetic declination. Loose and fast needle dialling. Calculation of areas and volumes. Contour lines and levelling. Traversing with the theodolite underground and on the surface. Connecting of surface and underground surveys. Triangulation. Mine plans and sections. The use, care, and testing of instruments.

"Each candidate must produce a plan of a Mine Survey and an underground levelling made and drawn by himself with the original plottings and the notes from which the plottings have been made, and the work must be certified by him as having been carried out by himself. The plan and levelling must have been made and drawn not more than twelve months before the date of the examination."¹

(vi) *General Management and Mining Legislation.*—Organization and surface arrangements under varying circumstances. Mines Acts. General and special regulations or orders and other legislation applicable to mines under the Coal Mines Act.

(b) FOR SECOND-CLASS CERTIFICATES.

The questions set in each of the undermentioned subjects for second-class certificates shall be of a nature suitable for practical working miners.

(i) Systems of laying out and working, under varying circumstances, of coal and other stratified deposits included under the Coal Mines Act. Methods of supporting roof and sides. Boring against old workings. Shot firing.

(ii) Ventilation, the properties, identification, and practical estimation of gases met with in mines. Natural ventilation, fans, and other ventilators. The distribution and control of the air underground. Construction, use, and testing of safety lamps

(iii) Explosions in mines, underground fires and inundations, their causes and prevention. Coal dust. Spontaneous heating. Rescue operations, apparatus and organization.

(iv) Machinery and plant in common use in a colliery, including the use of electricity, and with special reference to safety.

(v) Arithmetic (simple rules). Elementary surveying and levelling.

(vi) Mines Act. General and special regulations and orders. Writing of reports.

Candidates for first and second-class certificates will, in the *vivâ voce* examination, be required to display a detailed know-

¹ Amended by rule dated 11 September. Statutory Rules and Orders, 1913, No 986.

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ledge of practical methods of mining in the division in which they are being examined.

5. A candidate for a first-class certificate of competency must qualify in each of the subjects for the first-class examination, and must obtain 40 per cent of the maximum marks obtainable for each paper, 40 per cent of the maximum marks obtainable for the oral examination, and 60 per cent on the whole examination (written and oral), to qualify :—

	Maximum marks obtainable for each paper
1. Winning and working	250
2. Theory and practice of ventilation ..	200
3. Explosions in mines, underground fires and inundations	130
4. Machinery	150
5. Surveying, levelling, and drawing ..	140
6. General management and mining legislation	130
Total	1,000

Maximum marks obtainable for the oral examination for candidates for first-class certificates 400

A candidate for a second-class certificate of competency must qualify in each of the subjects for the second-class examination, and must obtain 40 per cent of the maximum marks obtainable for each paper, 40 per cent of the maximum marks obtainable for the oral examination, and 60 per cent on the whole examination (written and oral), to qualify :—

	Maximum marks obtainable for each paper.
1. Systems of laying out and working coal, etc.	300
2. Ventilation	300
3. Explosions in mines, underground fires and inundations	100
4. Machinery	100
5. Arithmetic and elementary surveying and levelling	100
6. Mines Act, general and special regulations, etc.	100
Total	1,000

Maximum marks obtainable for the oral examination for candidates for second-class certificates 600

Scale of fees.—By Order, dated 12 October, 1912,¹ the Secretary of State, under subsection 5, has fixed the fees to be paid by applicants as follows :

- (1) The fees to be paid by applicants for Certificates of Competency as Manager or Under-manager shall be—
 in the case of a First-class Certificate, £2;
 in the case of a Second-class Certificate, £1.
- (2) The fee to be paid by an applicant for a Certificate from the Board for Mining Examinations of qualification as a Surveyor shall be £1.

10. *Grant of certificates.*—(1) The Secretary of State shall deliver to every applicant who is duly reported by the Board for Mining Examinations to have passed the examination satisfactorily such a certificate of competency as the case requires.

(2) The Secretary of State may deliver such a certificate without examination to an applicant who is the holder of a certificate granted in any British possession or foreign country, if the Board report that the standard of training and examination required for the grant of such a certificate is equivalent to that required for the grant of a corresponding certificate under this Act.

(3) A register of the holders of certificates shall be kept by such person and in such manner as the Secretary of State directs.

This section is in substitution for subsections 1 and 3 of section 26 of the Act of 1887.

11. *Inquiry into competency of holders of certificates.*—

(1) If at any time representation is made to the Secretary of State by an inspector or otherwise that any person holding a certificate of competency under this Act is, by reason of incompetency or gross negligence or misconduct in the capacity of, or while temporarily performing the

¹ Statutory Rules and Orders, 1912, No. 1537.

duties of, manager or under-manager of a mine, unfit to continue to hold a certificate of competency, or has been convicted of an offence against this Act or any enactment repealed by this Act, the Secretary of State may, if he thinks fit, cause inquiry to be made into the conduct of that person, and with respect to every such inquiry the following provisions shall have effect —

- (a) The inquiry shall be public, and shall be held, at such place as the Secretary of State may appoint, by such county court judge, metropolitan police magistrate, stipendiary magistrate, or other person or persons (hereinafter in this section referred to as the court) as may be directed by the Secretary of State, and either alone or with the assistance of any assessor or assessors named by the Secretary of State.
- (b) The Secretary of State shall, before the commencement of the inquiry, furnish to the person into whose conduct inquiry is made a statement of the case on which the inquiry is instituted :
- (c) The person into whose conduct inquiry is made may attend the inquiry by himself, his counsel, solicitor, or agent, and may, if he thinks fit, be sworn and examined as an ordinary witness in the case :
- (d) The court shall, on the conclusion of the inquiry, send to the Secretary of State a report containing a full statement of the case, and the opinion of the court thereon, and such report of, or extracts from, the evidence as the court may think fit :
- (e) The court shall have power to cancel or suspend the certificate of the person into whose conduct inquiry is made, if it finds that he is, by reason of incompetency, or of such gross negligence or mis-

conduct as aforesaid, or of his having been convicted of an offence against this Act or any enactment repealed by this Act, unfit to continue to hold a certificate of competency :

- (f) The court may require the person into whose conduct inquiry is made to deliver up his certificate. The court shall hold a certificate so delivered until the conclusion of the investigation, and shall then either restore, cancel, or suspend the certificate according to its judgment on the case :
- (g) The court shall have, for the purpose of the inquiry, all the powers of a court of summary jurisdiction when acting as a court in hearing informations for offences against this Act, and all the powers of an inspector under this Act, and in addition the following powers .—
 - (i) power, by summons signed by the court, to require the attendance of all such persons as it thinks fit to summon and examine for the purpose of the inquiry, and for that purpose to require answers or returns to such inquiries as the court thinks fit to make ;
 - (ii) power to require the production of all books, papers, and documents which the court considers important for the purpose of the inquiry :
- (h) A person attending as a witness before the court shall be allowed such expenses as would be allowed to a witness attending on subpoena before a court of record ; and in case of dispute as to the amount to be allowed, the same shall be referred by the court to a master of the Supreme Court, who, on request signed by the court, shall

- ascertain and certify the proper amount of such expenses.

(2) If any person without reasonable excuse (proof whereof shall lie on him) fails to comply with any summons or requisition of the court, or impedes the court in the execution of its duty, he shall be guilty of an offence against this Act, and a person who is guilty of any such offence shall, in addition to any other fine to which he is liable under this Act, be liable to a fine not exceeding one pound for every day during which the offence continues.

(3) The court may make such order as it thinks fit respecting the costs and expenses of the inquiry, and such order shall, on the application of any party entitled to the benefit thereof, be enforced by any court of summary jurisdiction as if such costs and expenses were a fine imposed by that court.

(4) The Secretary of State may, if he thinks fit, pay to the person or persons constituting the court, including any assessors, such remuneration as he may with the consent of the Treasury determine

This section re-enacts sections 27 and 28 of the Act of 1887. Misconduct is added by the Act as a reason for an inquiry into the competency of a manager or under-manager.

Penalty.—By section 101, p. 171, a person guilty of an offence under subsection 2 is liable to a fine not exceeding £5

12. *Provisions as to cancellation and suspension of certificates.*—(1) Where a certificate of competency under this Act is cancelled or suspended in pursuance of this Act, the Secretary of State shall cause the cancellation or suspension to be recorded in the register of holders of certificates.

(2) The Secretary of State may at any time, if it is shown to him to be just so to do, renew or restore, on such terms as he thinks fit, any certificate which has been

cancelled or suspended in pursuance of this Act, and cause the renewal or restoration to be recorded in the register.

This section re-enacts section 29 of the Act of 1887.

13. *Copies of lost certificates.*—Whenever any person proves to the satisfaction of the Secretary of State that he has, without fault on his part, lost or been deprived of any certificate granted to him under this Act, the Secretary of State shall, on payment of such fee, if any, as he may prescribe, cause a copy of the certificate to which the applicant appears by the register to be entitled, to be made out, and certified by the person who keeps the register, and delivered to the applicant; and any copy which purports to be so made and certified as aforesaid shall have all the effect of the original certificate.

This section re-enacts section 30 of the Act of 1887.

Prescribed fee.—By Order dated 12 October, 1912,¹ the Secretary of State has prescribed that the fees to be paid for copies of Certificates of Competency as Manager or Under-manager shall be :—

in the case of a First-class Certificate, 5s.

in the case of a Second-class Certificate, 2s. 6d.

FIREMEN, EXAMINERS, AND DEPUTIES

14. *Appointment of firemen, examiners, and deputies.*—
(1) For every mine there shall be appointed by the manager in writing one or more competent persons (hereinafter referred to as firemen, examiners, or deputies) to make such inspections and carry out such other duties as to the presence of gas, ventilation, state of roof and sides, and general safety (including the checking and recording of the number of persons under his charge) as are required by this Act and the regulations of the mine.

¹ Statutory Rules and Orders, 1912⁷ No. 1538.

(2) A fireman, examiner, or deputy shall be required to devote his whole time to such duties as aforesaid (hereinafter referred to as his statutory duties), but this provision shall not apply in the case of a fireman, examiner, or deputy in—

- (a) any mine in which the total number of persons employed below ground at one time does not exceed thirty; or
- (b) any mine in the counties of Durham or Northumberland; or
- (c) any mine exempted by the inspector of the division on the ground of the special circumstances of the mine;

and nothing in this provision shall prevent any fireman, examiner, or deputy in any mine being employed in measuring the work done by persons in his district, or in firing shots in his district :

Provided that any duties assigned to or undertaken by any fireman, examiner, or deputy in addition to his statutory duties shall not be such as to prevent him carrying out his statutory duties in a thorough manner; and, if any question arises whether any additional duties are such as to prevent him carrying out his statutory duties in a thorough manner, that question shall be decided by the inspector of the division, whose decision shall be final.

(3) The district of a mine assigned to a fireman, examiner, or deputy shall not be of such a size as would prevent him from carrying out in a thorough manner all his statutory duties.

(4) A mine in which there is a contravention of this

section shall be deemed not to be managed in conformity with this Act.

Subsection 1 is in substitution for subsection 1 of section 49, rule 4, of the Act of 1887. The rest of the section is new.

Regulations of the mine.—This expression means the general and special regulations made and approved by the Secretary of State in pursuance of the powers conferred by sections 86 and 87, pp. 137-8.

Firemen, examiners, and deputies.—Regulations relating to the observance of their statutory duties with respect to shafts *not* in the course of construction are contained in rules 49 to 62 inclusive of the General Regulations dated 10 July, 1913,¹ p. 224, and with respect to shafts in the course of construction, are contained in Part VI of the said General Regulations, p. 258.

Not managed in conformity.—In such event by section 101 (2), p. 171. The owner, agent, and manager is each deemed guilty of an offence and is liable to the penalties imposed by subsections 3 and 4.

Statutory duty.—The criminal liability of the owner, agent, and manager is limited by the provisions of section 102 (1), (2), and (3), and the civil liability of the owner by section 102 (8), *post*, p. 172. As to whether the duty is absolute or qualified, see section 75 n., p. 112.

15 *Qualifications of firemen, examiners, and deputies.*—

(1) A person shall not after the first day of January, nineteen hundred and thirteen, be qualified to be appointed or to be a fireman, examiner, or deputy unless he—

- (a) is the holder of a first or second-class certificate of competency under this Act or is twenty-five years of age or upwards and has had at least five years' practical experience underground in a mine, of which not less than two years have been at the face of the workings of a mine; and

¹ Statutory Rules and Orders, 1913, No. 748.

- (b) has obtained a certificate in the prescribed form
 - from a mining school or other institution or authority approved by the Secretary of State as to his ability to make accurate tests (so far as practicable with a safety lamp) for inflammable gas, and to measure the quantity of air in an air-current, and that his hearing is such as to enable him to
 - carry out his duties efficiently; and
- (c) has, within the preceding five years, obtained from such approved school, institution, or authority as aforesaid, or from a duly qualified medical practitioner, a certificate in the prescribed form to the effect that his eyesight is such as to enable him to make accurate tests for inflammable gas and that his hearing is such as to enable him to carry out his duties efficiently, the expense of obtaining which shall, in the case of a person employed at the time as fireman, examiner, or deputy, be borne by the owner of the mine.

Provided that a person shall not be required to have obtained a certificate as to ability to make tests for inflammable gas or as to eyesight, if he is employed in a mine in which inflammable gas is unknown.

(2) The certificate as to the eyesight and hearing of a fireman, examiner, or deputy employed in a mine shall, whilst he is so employed, be kept at the office at the mine, and, whenever a requisition in that behalf is made by an inspector, produced for his inspection.

This section is entirely new.

Certificate in the prescribed form.—By Order of the Secretary of State, dated 2 May, 1912,¹ the Certificate of Qualification required under subsection (1) (b) of this section must be in the form contained in the Schedule thereto:—

¹ Statutory Rules and Orders, 1912, No. 450.

Schedule.

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Certificate of Qualification of Fireman, Examiner, or
Deputy under section 15 (1) (b).

This is to certify that _____ residing at
_____ has been duly examined and has satisfied the

Examiners

- (¹) (a) That he is able to make accurate tests (so far as practicable with a safety lamp) for inflammable gas,
- (²) (b) That he is able to measure the quantity of air in an air-current,
- (c) That his hearing is such as to enable him to carry out efficiently the duties of fireman, examiner, or deputy.

(Signature of person authorized
in that behalf by the approved
School, Institution, or Au-
thority) _____

Date _____

Name of approved School, In-
stitution or Authority _____

- (¹) (a) is to be struck out in the case of a candidate producing a certificate from the manager of his mine that he is employed in a mine in which inflammable gas is unknown.
- (²) (b) is to be struck out in the case of a candidate producing a certificate from the manager of his mine that he was employed as a fireman, examiner, or deputy on the 16th December, 1911.

Existing fireman, examiner, and deputy.—By section 123 (b), *post*, p. 198. These persons, if employed as a fireman, examiner, or deputy at the date of the passing of the Act, are exempt from the provisions of this section.

INSPECTIONS ON BEHALF OF WORKMEN

16. *Periodical inspection on behalf of workmen* —(1)

The workmen employed in a mine may, at their own cost, appoint two of their number or any two persons, not being mining engineers, who are or who have been practical working miners and have had not less than five years' experience of underground work, to inspect the mine, and the persons so appointed shall be allowed once at least in every month, accompanied, if the owner, agent, or manager of the mine thinks fit, by himself or one or more officials of the mine, to go to every part of the mine, and to inspect the shafts, roads, levels, workings, airways, ventilating apparatus, old workings, and machinery, and shall, where an accident has occurred in a mine of which notice is required under this Act to be given, be allowed to go together with any person acting as legal adviser to the workmen, or with a mining or electrical engineer selected by the workmen, accompanied as aforesaid, to the place where the accident occurred, and to make such inspection as may be necessary for ascertaining the cause of the accident, subject, however, to the provisions of this Act requiring the place where an accident has occurred to be left as it was immediately after the accident.

(2) Every facility shall be afforded by the owner, agent, and manager and all persons in the mine for the purpose of the inspection, and the manager shall on demand produce to the persons appointed the certificates of all firemen, examiners, or deputies employed in the mine, and the persons appointed shall, except where the inspection is an inspection for the purpose of ascertaining the cause of an accident, forthwith make and sign a full and accurate report of the result of the inspection in a book to be kept at the mine for the purpose; and the owner,

agent, or manager shall forthwith cause a true copy of the report to be sent to the inspector of the division.

(3) If the owner, agent, or manager, or any other person refuses or neglects to afford such facilities as aforesaid, or if the manager fails to produce the certificates of the firemen, examiners, or deputies, or if the owner, agent, or manager fails to send a true copy of the report in accordance with this section, he shall be guilty of an offence against this Act.

This section re-enacts and amplifies section 49, rule 38, of the Act of 1887.

Accident.—For the definition of accident, see sections 80 and 81, pp. 128–130.

Legal adviser.—By section 80 (1), (iii), p. 128, where “an accident causing loss of life or serious personal injury occurs, notice in such form, and accompanied by such particulars as may be prescribed, shall be given to the person (if any) nominated by the persons employed at the mine for the purpose of receiving notice under that section on their behalf.”

Place of accident.—Inspection of place of accident is subject to the provisions of section 80 (2), p. 129.

Penalty.—For any breach of the above provisions the owner, agent, and manager, and any other person, is each liable to the penalties imposed by section 101, *post*, p. 171.

Statutory duty.—The criminal liability of the owner, agent, and manager is limited by the provisions of section 102 (1), (2), and (3), and the civil liability of the owner by section 102 (8), p. 172. As to whether the duty is absolute or qualified, see section 75 n., p. 112.

RETURNS, PLANS, NOTICES, AND BOOKS

17. *Reports by persons having responsible duties.*—(1) In addition to the reports specially required by this Act, it shall be the duty of every person on whom responsible duties are imposed with respect to safety or to the condition of the roadways, workings, ventilation, machinery, shafts, shot-firing, safety lamps, electrical plant, or

animals at a mine, and who shall be required to do so by the regulations of the mine, to make, at such intervals as may be fixed by the regulations of the mine in a book to be kept at the mine, full and accurate reports of the matters falling within the scope of his duties.

(2) Copies of the reports required to be made under the last preceding section and under the provisions of this Act relating to inspections before commencing work and inspections during shifts shall be posted up at the pit head, not later than ten o'clock in the morning on the day following the day on which the reports are made, and remain posted until ten o'clock in the morning on the following day.

This section is entirely new.

Inspections as to safety.—For provisions as to reports, see sections 63, 64, 65, 66, and 67, pp. 100-104.

18. *Returns by owner, agent, or manager of mine*—(1) On or before the twenty-first day of January in every year, the owner, agent, or manager of every mine shall send to the inspector of the division a correct return, specifying, with respect to the year ending on the preceding thirty-first day of December—

- (a) the particulars contained in the form in the First Schedule to this Act, or in such other form as may, from time to time, be prescribed in lieu of that form ;
- (b) such particulars as may be prescribed of all accidents which occurred in or about the mine during the year to which the return relates and disabled, for more than seven days, any person employed in or about the mine from working at his ordinary work ;

- (c) such particulars as may be prescribed as to the supply and maintenance with respect to the mine of appliances for use in rescue work and ambulance appliances, the formation and training of rescue brigades, and the training of men in ambulance work ; and
 - (d) such other particulars as the Secretary of State may prescribe by order made in like manner and subject to the like procedure as general regulations under this Act.
- (2) Forms for the purpose of the returns required by this section shall, on application, be furnished by the inspector of the division
- (3) The Secretary of State may publish the aggregate results of the returns made under this section with respect to any particular county or inspector's division, or any large portion of a county or inspector's division, and so much of any individual return as does not relate to the quantity or value of mineral gotten, but the portion of any individual return relating to the quantity or value of mineral gotten shall not be published without the consent of the owner of the mine to which it relates ; and no person, except an inspector or the Secretary of State or any body of commissioners incorporated by Act of Parliament for the drainage of mines, and authorized to assess and levy rates in respect of minerals gotten from such mines, shall be entitled, without such consent, to see such portion as aforesaid of any individual return.
- (4) Every owner, agent, or manager of a mine who fails to comply with this section, or make any return which is to his knowledge false in any particular, shall be guilty of an offence against this Act.

This section re-enacts and amplifies section 33 of the Act of 1887 and section 1 of the Notice of Accidents Act, 1906. The provisions relating to rescue work and ambulance appliances are new.

Annual return—The form to be used corresponds with that in Schedule III of the Act of 1887 so far as particulars of owners, agents, and managers, persons employed, quantity of mineral gotten, number of working days, and ventilation are concerned. In addition to these particulars must now also be given of explosions, coal-cutting machines, and conveyors, safety lamps and type and aggregate horse-power of electrical apparatus (see First Schedule, pp. 201-7).

Further, by section 16 of the Third Schedule, the owner, agent, or manager must furnish a statement showing the number of horses used in the mine, of the deaths by accident or disease, and of other cases of injury or ill-treatment.

Such other particulars—Other particulars may be prescribed by the Secretary under the power conferred by section 86, p. 137, of making general regulations.

Penalty—For any breach of the above provisions the owner, agent, and manager is each liable to the penalties imposed by section 101, p. 171.

Statutory duty—The criminal liability of the owner, agent, and manager is limited by section 102 (1), (2), and (3), and the civil liability of the owner by section 102 (8), p. 172.

As to whether this duty is absolute or qualified, see section 75 n., p. 112. It was said by Cozens-Hardy, M.R., in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 153, that section 33 of the Act of 1887 imposed direct obligations on the owner to carry out the provisions of the section.

19. *Notices of opening and abandonment of mine*—In any of the following cases, namely,

- (i) Where any working is commenced for the purpose of opening a new shaft, outlet, or seam of any mine ;
- (ii) Where a shaft, outlet, or seam of any mine is abandoned or the working thereof discontinued ,

- (iii) Where the working of a shaft, outlet, or seam of any mine is recommenced after any abandonment or discontinuance for a period exceeding two months ; or
- (iv) Where any change occurs in the name of any mine, or in the name of the owner or agent of any mine, or in the principal officers of any company which is the owner of a mine ;

the owner, agent, or manager of the mine shall give notice thereof to the inspector of the division within two months after the commencement, abandonment, discontinuance, recommencement, or change, and, if such notice is not given, the owner, agent, or manager shall be guilty of an offence against this Act.

This section re-enacts section 36 of the Act of 1887, with the addition of the expression "outlet."

Service of notice.—See section 120, p. 194.

Penalty.—For any breach of the above provisions the owner, agent, and manager is each liable to the penalties imposed by section 101, p. 171.

Statutory duty.—The criminal liability of the owner, agent, or manager is limited by section 102 (1), (2), and (3), and the civil liability of the owner by section 102 (8), p. 172. As to whether this duty is absolute or qualified, see section 75 n., p. 112.

20. *Plans of mine and ventilation.*—(1) The owner, agent, or manager of every mine shall keep in the office at the mine—

- (i) an accurate plan of the workings of the mine, up to a date not more than three months previously, showing—
 - (a) the boundaries of the mine, where possible, and the position of the workings with regard to the surface and variations of level on the roadways from the Ordnance basis, being

variations of ten feet or any multiple of ten feet ; and

(b) the general direction and rate of dip of the strata , and

(c) the position, direction, and extent of every known fault of every seam with its vertical throw, and of every known washout and intrusive dyke , and

(d) the depth of every shaft , and

(ii) a section of the strata sunk through, or, if that is not reasonably practicable, a section of every seam.

(2) The owner, agent, or manager of every mine shall also keep in the office at the mine a separate plan showing the system of ventilation in the mine, and in particular the general direction of the currents, the points where the quantity of air is measured, and the principal devices for the regulation and distribution of the air, and on every such plan the intake airways shall be coloured blue and the return airways red.

(3) Every such plan must be on a scale of not less than forty inches to the mile, and must be prepared by or under the supervision of a surveyor possessing the prescribed qualifications, and shall be of a durable character

Provided that, in the case of a mine opened before the passing of this Act, it shall be sufficient if the scale of the plan is not less than the Ordnance scale of twenty-five inches to the mile.

(4) The owner, agent, or manager of the mine shall, on request at any time of an inspector, produce to him at the office at the mine such plans and section, and shall also, on the like request, mark on such plans the then state of the workings of the mine as respects the particulars required to be shown on the plan under subsection (1) of this section ; and the inspector shall be entitled to

examine the plans and section, and, for official purposes only, to make a copy of any part thereof.

(5) If the owner, agent, or manager of any mine fails to keep, or wilfully refuses to produce or allow to be examined or copied, any such plan or section, or wilfully withholds any portion thereof, or wilfully refuses, on request, to mark thereon the state of the workings of the mine, or conceals any part of those workings, or produces an imperfect or inaccurate plan or section, he shall (unless he shows that he was ignorant of the concealment, imperfection, or inaccuracy) be guilty of an offence against this Act.

Further, the inspector may, by notice in writing (whether a penalty for the offence has or has not been inflicted), require the owner, agent, or manager to cause an accurate plan and section, showing the particulars hereinbefore required, to be made within a reasonable time at the expense of the owner of the mine in accordance with the provisions hereinbefore contained, and, if the owner, agent, or manager fails within twenty days after the requisition of the inspector or within such further time as may be allowed by the Secretary of State, to cause such plan and section to be made as hereby required, he shall be guilty of an offence against this Act.

This section re-enacts and amplifies section 34 of the Act of 1887 and section 3 of the Coal Mines Regulation Act, 1896.

Office.—By section 122, p. 195, this means “an office on the surface of the mine.”

Scale of plan.—The minimum is now reduced from twenty-five to forty inches to the mile. The same scale as that of the plan for the time being in use at the mine is no longer permitted.

Qualifications of Surveyors—By Order dated 27 February, 1912, for the purposes of sections 20 and 21 of the Act—

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(1) a certificate from the Board for Mining Examinations or from an institution approved by the Secretary of State that—

(i) he has had at least two years' practical experience in the surveying of mines ;

(ii) he is competent

(a) to make an accurate survey of the workings of a mine and to connect such survey with a surface survey ;

(b) to make accurate levellings ; and

(c) to plot accurately surveys and levellings ;

(iii) he has given satisfactory evidence of his sobriety and general good conduct , or

(2) a Manager's First-class Certificate of Competency endorsed by the said Board or by a Divisional Inspector of Mines to the effect that he has had at least two years' practical experience in the surveying of mines.

In the case of a person who was employed in surveying mines to which the Act applies at the date of the passing of the Act, the certificate first above-mentioned may be given by the Inspector of Mines for the division in which he was so employed at that date if application be made to him for the same not later than 31 December, 1912.¹

Penalty.—For any breach of the above provisions, the owner, agent, and manager is each liable to the penalties imposed by section 101, *post*, p. 171.

Statutory duty.—The criminal liability of the owner, agent, and manager in respect of subsections 1, 2, 3, and 4 is limited (a) by proof of his ignorance of any concealment of any part of the workings of the mine or of the production of imperfect or inaccurate plans, and (b) by the provisions of section 102 (1), (2), and (3), p. 172. In respect of an offence under subsection 5, their criminal liability is only limited by section 102 (1), (2), and (3).

The civil liability of the owner is limited by section 102 (8). As to whether the duty is absolute or qualified, see section 75 n., p. 112.

¹ Statutory Rules and Orders, 1912, No. 228.

It was said by Cozens-Hardy, M.R., in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 153, that section 34 of the Act of 1887—corresponding to this section—imposed direct obligations on the owner to carry out the provisions of the section.

21. *Plans of abandoned mines.*—(1) Where any mine or seam is abandoned, the person who is owner of the mine or seam at the time of its abandonment shall, within three months after the abandonment, send to the Secretary of State :

(i) An accurate plan of the mine or seam showing—

(a) the boundaries of the workings of the mine or seam, including not only the working faces but also all headings in advance thereof, up to the time of the abandonment ;

(b) the pillars of coal or other mineral remaining unworked ;

(c) the position, direction, and extent of every known fault of every seam in the mine or of the seam, as the case may be, with its vertical throw and of every known washout and intrusive dyke ;

(d) the position of the workings with regard to the surface ;

(e) the general direction and rate of dip of the strata ; and

(f) the depth of every shaft or, in the case of an abandoned seam, the depth of every shaft from the surface to that seam ; and

(ii) A section of the strata sunk through, or, if that is not reasonably practicable, a section of every seam in the mine or of the seam, as the case may be.

(2) Every such plan must be on a scale of not less than that of the Ordnance Survey of twenty-five inches to the

mile in the case of a mine opened before the passing of this Act, and on a scale of not less than forty inches to the mile in the case of a mine opened after the passing of this Act, and its accuracy must be certified, so far as is reasonably practicable, by a surveyor possessing the prescribed qualifications, and it shall be of a durable character :

Provided that the foregoing requirement as to the scale of the plan shall not apply as respects any workings plotted before the commencement of this Act.

(3) The plan and section shall be preserved under the care of the Secretary of State

Provided that, if an abandoned mine or seam is reopened, the owner shall be entitled to have the plan and section returned to him on depositing with the Secretary of State a copy of the plan and section, or of such portions thereof as the Secretary of State may require, certified to be correct by a competent draftsman.

(4) No person except an inspector shall be entitled, without the consent of the owner for the time being of the mine or seam, or a licence of the Secretary of State, to see the plan or section whilst preserved as aforesaid until after the expiration of ten years from the time of the abandonment, but such licence shall not be granted, unless the Secretary of State is satisfied that the inspection of such plan is necessary in the interests of safety.

(5) Where a mine or seam has not been worked for a period of twelve months, it shall be deemed for the purposes of this Act to have been abandoned unless the roadways and workings of the mine or seam are maintained in an accessible condition.

(6) If the owner of a mine or seam fails to comply with this section, he shall be guilty of an offence against this Act.

(7) A complaint or information for an offence under

this section may be made or laid at any time within six months after abandonment of the mine or seam, or after service on the owner aforesaid of a notice to comply with the requirements of this section, whichever last happens.

(8) The High Court may, on application by or on behalf of the Secretary of State, make an order requiring any person who has, for the time being, the custody or possession of any plan or section of an abandoned mine or seam to produce it to the Secretary of State for the purpose of inspection or copying.

This section re-enacts and amplifies section 38 of the Act of 1887 and subsections 1 and 2 of section 4 (1) of the Coal Mines Act, 1896.

Prescribed qualifications of surveyor.—See note to section 20, p. 36.

Complaint or information—In *Stokes v. Hill* [1901], 1 K.B. 493, it was held that a letter in general terms requiring compliance with the requirements of section 38 of the Act of 1887, as amended by section 4 of the Act of 1896, was a sufficient notice. In such matters the court would not be too strict. The six months after service of this notice having expired before proceedings were taken, the information was held to be out of time.

Penalty.—For any breach of the above provisions the owner is liable to the penalties imposed by section 101, *post*, p. 171.

Statutory duty.—It was said by Cozens-Hardy, M.R., in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 154, that section 38 of the Act of 1887 and section 4 of the Act of 1896—corresponding to this section—imposed direct obligation on the owner to carry out the provisions of the section. Such duty, therefore, is absolute. The criminal liability of the owner is limited by the provisions of section 102 (3), and the civil liability by section 102 (8), p. 172. See also section 75 n., p. 112.

22. *Returns as to abandonment of mines.*—Where any mine is abandoned, the person who is owner of the mine

at the time of its abandonment shall, within three months of the abandonment, send to the inspector of the division a correct return specifying, with respect to the period which has elapsed since the expiration of the year covered by the last annual return made under this Act, the particulars required in that return, except those required under Parts B and D of the First Schedule to this Act ; and the provisions of this Act with respect to the said annual return shall apply to the return so sent

This section re-enacts and amplifies section 38 (3).

Correct return.—The particulars are those required by section 18, *ante*, p. 31, except those relating to ventilation, Part B, and those relating to electrical apparatus, Part D of the First Schedule, p. 207.

Penalty—For any breach of the above provisions the owner is liable to the penalties imposed by section 101, p. 171.

Statutory duty.—It was said by Cozens-Hardy, M.R., in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 154, that section 38 (3) of the Act of 1887—corresponding to this section—imposed direct obligations on the owner to carry out the provisions of the section. Such duty, therefore, is absolute.

The criminal liability of the owner is limited by the provisions of section 102 (3), and his civil liability by section 102 (8), p. 172. See also section 75 n., p. 112

23. *Power of Secretary of State to have new plans prepared*—If it appears to the Secretary of State that any plan or section required by this Act to be kept in the office at a mine or to be sent to the Secretary of State is inaccurate, and that in the interests of safety it is desirable to have a new plan or section prepared, he may appoint a surveyor to make such new plan or section, and a surveyor so appointed shall be afforded by the owner, agent, or manager all necessary facilities for the purpose of making such plan or section, and if, on the making of such new plan or section, it appears that the original

plan or section was inaccurate in any material particular, the cost of making the new plan or section, or such proportion thereof as the Secretary of State thinks fit, shall be defrayed by the owner of the mine or, as the case may require, the person who was at the time of its abandonment the owner of the mine or seam, and recoverable from him as a debt to the Crown.

This section is entirely new.

24. *Books and copies thereof.*—(1) All such books as are by this Act required to be kept at a mine shall be provided by the owner, agent, or manager, and shall be in the prescribed form, and the books, or a correct copy thereof, shall be kept at the office at the mine and any inspector, and any person employed in the mine or anyone having the written authority of any inspector or person so employed, may, at all reasonable times, inspect and take copies of and extracts from any such books; but nothing in this Act shall be construed to impose the obligation of keeping any such book or a copy thereof for more than twelve months after the book has ceased to be used for entries therein under this Act.

(2) Every report required by this Act to be recorded in a book kept at the mine for the purpose shall be submitted to the manager and under-manager, if any, of the mine, or, in the absence of the manager or under-manager, to the person performing the duties of manager or under-manager, as the case may be, in pursuance of the foregoing provisions of this Act, and shall be countersigned by them on the day on which the report is made or the day following.

(3) Any mine in which there is a contravention of or non-compliance with the provisions of this section shall be deemed to be not managed in conformity with this Act.

This section re-enacts and amplifies section 49, rule 37, of the Act of 1887.

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Prescribed form.—This means as prescribed by the Secretary of State.

Not managed in conformity.—In such case, by section 101 (2), p. 171, the owner, agent, and manager is each deemed guilty of an offence, and is liable to the penalties imposed by sub-sections 3 and 4 of section 101, p. 171.

Statutory duty.—The criminal liability of the owner, agent, and manager is limited by the provisions of section 102 (1), (2), and (3), and the civil liability of the owner by section 102 (8), p. 172. As to whether this duty is absolute or qualified, see section 75 n., p. 112.

MISCELLANEOUS

25. *Division of mine into parts*—(1) Where two or more parts of a mine are worked separately, the owner, agent, or manager of the mine may give notice in writing to that effect to the inspector of the division, and thereupon each such part shall, for all the purposes of this Act, be deemed to be a separate mine.

Provided that where each of such parts of a mine has not a separate system of ventilation, a mine shall not be so divided, except with the permission of the inspector of the division and subject to such conditions as he may prescribe.

(2) Every notice given under the foregoing provision must specify the points of separation on all roads connecting the different parts of the mine.

(3) If the Secretary of State is of opinion that the division of a mine in pursuance of this section tends to lead to evasion of the provisions of this Act, or otherwise to prevent the carrying of this Act into effect, he may object to the division by notice served on the owner, agent, or manager of the mine; and, if the owner, agent, or manager refuses to acquiesce in such objection, the matter shall be determined in manner provided by this Act for settling disputes.

Separate mine—This section corresponds with section 19 of the Act of 1887. In *Thorpe v. Davies* [1908], 2 K B. 750,

where the mine had not been divided under section 19, it was held that two seams in such mine constituted one "mine" within the meaning of the Act.

Settling disputes—The mode in which disputes under this section are to be settled is provided by section 116, p. 185.

26. *Fencing in case of abandoned mine.*—(1) Where any mine is abandoned or the working thereof discontinued, at whatever time the abandonment or discontinuance occurred, it shall be the duty of the owner thereof, and of every other person interested in the minerals of the mine, to cause the top or entrance of every shaft and outlet to be kept surrounded by a structure of a permanent character sufficient to prevent accidents :

Provided that—

- (i) Subject to any contract to the contrary, the owner of the mine shall, as between himself and any other person interested in the minerals of the mine, be liable to carry this section into effect, and to pay any costs, charges, and expenses incurred by any other person interested in the minerals of the mine in carrying this section into effect :
 - (ii) Nothing in this section shall exempt any person from any liability under any other Act, or otherwise.
- (2) No person shall be precluded by any agreement or otherwise from doing, or be liable to any injunction, damages, penalty, or forfeiture in respect of such acts as may be necessary in order to comply with the provisions of this section.
- (3) Any shaft or outlet which is not kept surrounded by a structure as required by this section shall be deemed to be a nuisance within the meaning of section 91 of the Public Health Act, 1875.¹

¹ 38 & 39 Vict. c. 55.

This section re-enacts and amplifies section 37 of the Act of 1887.

Abandonment.—It must be understood that this section applies to mines whether abandoned or discontinued before or after the passing of this Act; see *Stott v. Dickinson*, 34 L.T. (N.S.), 291 (1876), where it was held that section 41 of the Act of 1872, corresponding to section 37 of the Act of 1887 and of this Act, applied to a mine abandoned or discontinued at any time before or after the time of the Act coming into operation.

Owner.—It was decided in *Stott v. Dickinson* sup that a person who had been a lessee, but whose lease had expired before he was charged with a breach of this section, was not an "owner." But whether he were a tenant under a lease or under an agreement he would have been none the less an "owner."

It was held in *Arkwright v. Evans*, 49 L.T.M.C. 82 (1880), that the term "owner" in section 13 of the Metalliferous Mines Regulation Act, 1872,¹ corresponding to section 41 of the Coal Mines Regulation Act, 1872, means "any person or body corporate who is the immediate proprietor or lessee or occupier of a mine" and "does not include a person who merely receives a royalty rent or fine from a mine, or is merely the proprietor of a mine subject to any lease, grant, or licence for the working thereof, or is merely the owner of the soil and not interested in the minerals of the mine." In this case the lessee who was charged with a breach of the section for not fencing an abandoned lead mine, held under a lease from the Duchy of Lancaster, by which he had to pay to the Duchy by way of rent all he might receive annually in respect of the mine, with an additional yearly rent of five shillings. He had no pecuniary interest in the mine or in the minerals thereof. He was therefore in the opinion of the court in the position of a mere owner of the soil and not interested in the minerals (see section 122, p. 195).

Surrounded by a structure of a permanent character sufficient to prevent.—These words are substituted for the words "securely fenced for the prevention of" in the Acts of 1887 and 1872. In *Foster v. Owen*, 9 L.T.R. 22 (1892), it was decided that "securely fenced" in section 13 of the Metalliferous Mines Regulation Act, 1872, means a separate fence round

¹ 35 & 36 Vict c 77.

the top of the shaft and also across the side entrance, if any. In the present Act "outlet" is substituted for "side entrance" in the Act of 1887. "There is no distinction in the Act," said Matthew J., "between the shaft and the side entrance"

Statutory duty.—The duty of the owner under this section is absolute; *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 154. This absolute duty can only be discharged by the owner showing that he comes within the provisions of section 102 (1), (2), and (3), p. 172. His civil liability is limited by section 102 (8), p. 174. See also section 75 n., p. 112.

MINES WORKED BY A CONTRACTOR

27. *Special provisions as to mines worked by contractor.*—

(1) In every mine the materials required for the support of the roofs and sides shall be provided by and at the cost of the owner of the mine, and the firemen, examiners, or deputies and all other officials of the mine shall be appointed, and their wages paid, by the owner, notwithstanding that the mine or any part thereof is worked, or any part of the operations therein is carried on, by a contractor, and no such contractor, nor any person employed by him, shall be appointed to be manager, under-manager, or fireman, examiner, or deputy of the mine.

(2) Where under any contract existing at the passing of this Act the materials required for the support of the roof or sides are to be provided, or the wages of any official are to be paid, by any person other than the owner, the owner may apply to the county court of the district in which the mine is situate, and the court may make such variation in the terms of the contract as appears to the court just and equitable under the circumstances of the case, or in the alternative the court may, at the request of the owner, determine the contract.

(3) Any mine in which there is a contravention of or non-compliance with the provisions of this section shall be deemed to be not managed in conformity with this

Act. This section re-enacts and amplifies section 22 of the Act of 1887.

Fireman, examiner, and deputy.—To the former class of managers and under-managers ineligible for the office of contractor is now added that of firemen, examiners, and deputies of a mine

Existing contract.—By subsection 2, which is entirely new, the owner is now enabled to obtain relief against the contractor in the case of contracts in existence at the time of the passing of the Act. This practice of working the mines through a contractor is known as the Charter Master or Butty system. The system admittedly produces a bad effect on the discipline of the mine and the safety of the miner. Although dying out, it still exists in a good many small mines in the Black Country and elsewhere. "It is a system," said Mr W. N Atkinson, inspector of the Stafford district, "by which the pits are worked by contractors, called Charter Masters, under an agreement with the owner of the colliery, to deliver the coal, ironstone, or fireclay on the bank or at a wharf at an agreed price per ton. The agreements are usually terminable by two or four weeks' notice from either party. The colliery owner sinks the shafts, erects and maintains the machinery, and pays the winding engine-man and the boiler stoker. If safety lamps are used the owner provides and maintains them. In some cases the owner also pays a small sum (2s. 6d per week) to the fireman or 'doggy,' who examines the workings before the men go down, as provided by general rule 4. The owner also pays more or less for unproductive or 'dead' work underground, but I believe the practice varies in this respect.

"With the above exceptions, the Charter Master pays all wages and engages and dismisses the workmen. Holers are paid by the 'stint' of so many superficial feet of holing, and the other workpeople are paid day wages. The Charter Master provides horses, fodder, tubs, tools, candles, and explosives and other stores. Tram-rails are supplied by the owner, and in some cases he also provides timber.

"When a certificated manager is required, or an under-manager employed, the owner pays them, as required by the Act, and they look after his interests as against the Charter Master. When no manager is required a mining engineer will make periodical visits in the owner's interests.

"Charter Masters are almost invariably working miners who have acquired sufficient capital to enable them to take the working of a pit by contract. They have no permanent interest in the mine, and their chief object is to get the coal that is most easily obtained at the smallest possible cost. The system conduces to the working of the pits in an unskilful way and to the neglect of discipline and measures of safety."¹

This system was strongly condemned by the local officials of the Miners' Union, who gave evidence before the Royal Commission of 1909. One of the evils, the practice of Charter Masters to appoint their relatives or workmen as firemen or other officials, has now been prohibited by subsection 1. Another evil, leading to serious risks, was the practice of Charter Masters to supply the timber. For reasons of economy or want of capital, the supply of material was frequently inadequate. This practice has also been prohibited.

Not managed in conformity—In such event, by section 101 (2), p. 171, the owner, agent, manager and under-manager, and any other person, is each deemed guilty of an offence and is liable to the penalties imposed by subsections 3 and 4.

Statutory duty.—The criminal liability of the owner, agent, and manager is limited by section 102 (1), (2), and (3), and the civil liability of the owner by section 102 (8), p. 172. The duty of the owner would appear to be absolute (see *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. 146, and section 75 n., p. 112).

FORGERY OF CERTIFICATES

28. *Penalty for forgery of, or false declaration as to, certificate.*—Every person who commits any of the following offences; that is to say,

- (1) Forges or counterfeits any certificate of competency or other certificate granted under this Act or any Act repealed by this Act, or any official copy of any such certificate; or
- (2) Knowingly utters or uses any such certificate or

¹ Royal Commission, Mines, Second Report, 1909, Vol. XXXIV, pp. 66-71. [Cd. 4820.]

copy which has been forged or counterfeited or contains any false statement ; or

- (3) For the purpose of obtaining, for himself or any other person, employment as a manager or under-manager or in any other capacity, or the grant renewal or restoration of any such certificate as aforesaid, or a copy thereof, either
 - (a) makes or gives any declaration, representation, statement, or evidence which is false in any particular ; or
 - (b) knowingly utters, produces, or makes use of any such declaration, representation, statement, or evidence, or any document containing the same ; or
- (4) Knowingly makes any false statement in any report or entry required under this Act to be recorded in a book kept at the mine ,

shall be guilty of a misdemeanour, and be liable on conviction to imprisonment, with or without hard labour, for a term not exceeding two years.

This section re-enacts and amplifies section 32 of the Act of 1887.

PART II

. . PROVISIONS AS TO SAFETY

VENTILATION

29. *Standard of ventilation* —(1) An adequate amount of ventilation shall be constantly produced in every mine to dilute and render harmless inflammable and noxious gases to such an extent that all shafts, roads, levels, stables, and workings of the mine shall be in a fit state for working and passing therein, and in particular that the intake airways up to within one hundred yards

of the first working-place at the working-face which the air enters shall be normally kept free from inflammable gas.

Provided always that—

- (a) an abandoned road or level not used in connection with the working of the mine shall, if properly fenced off, not be deemed to be a road or level within the meaning of this section ; and
- (b) no person shall be liable in respect of any contravention of or failure to comply with the provisions of this section if he shows that the ventilation was interrupted in consequence of an accident, and that no persons were employed in any part of the mine in which an adequate amount of ventilation was not being produced, except such persons as it was necessary to employ in that part of the mine for the purpose of restoring the ventilation.

(2) In every mine the quantity of air in the main current and in every split and at such points as may be determined by the regulations of the mine shall, at least once in every month, be measured and entered in a book to be kept for the purpose at the mine.

(3) For the purposes of this section, a place shall not be deemed to be in a fit state for working or passing therein if the air contains either less than nineteen per cent. of oxygen or more than one-and-a-quarter per cent of carbon dioxide, and an intake airway shall not be deemed to be normally kept free from inflammable gas if the average percentage of inflammable gas found in six samples of air taken by an inspector in the air current in that airway at intervals of not less than a fortnight exceeds one quarter :

Provided that, in case of a mine which is liable to spontaneous combustion of coal, a place shall be deemed

to be in a fit state for working or passing therein, notwithstanding that the air contains either less than nineteen per cent of oxygen or more than one and a quarter per cent of carbon dioxide, if the mine has been exempted by order of the Secretary of State, and the conditions on which the exemption is granted are complied with.

This section re-enacts and amplifies section 49, rule 1, of the Act of 1887.

Ventilation.—The provisions as to ventilation are much more specific than those under section 49, rule 1, of the Act of 1887.

Ventilation must be maintained during Sundays or other days during which the mine is not being worked, *Knowles v. Dickinson*, 2 E. and E. 705. The application of this rule is not confined to the ventilation of the working places and travelling roads, but requires that so much of the mine must be kept ventilated as to render the working places and travelling roads safe, *Brough v. Homfray*, 3 Q.B. 771, 37 L.J.M.C. 177. If it is proved that the manager, by the means provided by the owner, might have improved the ventilation, the manager is guilty of an offence, *Hall v. Hopwood*, 49 L.J.M.C. 17 (1879). Particulars of defective ventilation should be given on complaint: *Roberts v. Atkinson*, 18 Sess. Cas. (ser. 4), Just. Cas. 8.

Air measurements.—The points at which the quantity of air shall be measured in pursuance of subsection 2 are determined by rule 77 of Part II of the General Regulations, dated 10 July, 1910, *post*, p. 229.

Liability of owner, agent, and manager.—See generally section 75 n., p. 112, which corresponds with section 50 of the Act of 1887. In *Anderson v. Atkinson*, 99 L.T. 22 (1908), Darling, J., said: "Section 50 of the Act amounts to this, that once you establish that a mine is not well ventilated, the owner, agent, and manager are all presumed to be guilty and must prove their innocence. That being the absolute contrary of the procedure in a court of justice." In spite of this stricture on the legislature by the learned judge, the onus of proof still lies upon the owner, agent, and manager

of the first working-place at the working-face which the air enters shall be normally kept free from inflammable gas.

Provided always that—

- (a) an abandoned road or level not used in connection with the working of the mine shall, if properly fenced off, not be deemed to be a road or level within the meaning of this section ; and
- (b) no person shall be liable in respect of any contravention of or failure to comply with the provisions of this section if he shows that the ventilation was interrupted in consequence of an accident, and that no persons were employed in any part of the mine in which an adequate amount of ventilation was not being produced, except such persons as it was necessary to employ in that part of the mine for the purpose of restoring the ventilation.

(2) In every mine the quantity of air in the main current and in every split and at such points as may be determined by the regulations of the mine shall, at least once in every month, be measured and entered in a book to be kept for the purpose at the mine.

(3) For the purposes of this section, a place shall not be deemed to be in a fit state for working or passing therein if the air contains either less than nineteen per cent. of oxygen or more than one-and-a-quarter per cent of carbon dioxide, and an intake airway shall not be deemed to be normally kept free from inflammable gas if the average percentage of inflammable gas found in six samples of air taken by an inspector in the air current in that airway at intervals of not less than a fortnight exceeds one quarter.

Provided that, in case of a mine which is liable to spontaneous combustion of coal, a place shall be deemed

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Liability of owner, agent, and manager.—See generally section 75 n., p. 112, which corresponds with section 50 of the Act of 1887. In *Anderson v. Atkinson*, 99 L.T. 22 (1908), Darling, J., said: "Section 50 of the Act amounts to this, that once you establish that a mine is not well ventilated, the owner, agent, and manager are all presumed to be guilty and must prove their innocence. That being the absolute contrary of the procedure in a court of justice." In spite of this stricture on the legislature by the learned judge, the onus of proof still lies upon the owner, agent, and manager

by section 75 of the present Act, to show that he "had taken all reasonable means of publishing and to the best of his power enforcing those provisions to prevent" any contravention of or non-compliance with any of the provisions of Part II of the Act.

In this case the mine was a "fiery" one, and exceptional care as to ventilation was required. A manager and an under-manager had been duly appointed, and the general rules contained in section 49 of the Act of 1887 had been duly published. It was proved that on 19 September, 1907, in consequence of the want of ventilation, the stythe and fire-damp had not been diluted and rendered harmless, so as to cause the parts where the men were working and passing to be in a fit state for such purposes. It was also proved that a brattice was defective and had been badly put up, in consequence of which the air did not go to the face. For some seven or eight months prior to this the manager had through ill-health been unable to discharge his duties as manager and to go down the mine. The agent during the first part of this period had conferred twice or thrice a week with the under-manager, and during the latter part with a man engaged as assistant to the manager, but he had not perused the overmen's reports, and had not been down the mine between 3 July and 19 September, 1907. It was admitted that the overmen's reports to the under-manager for 19 September stated that the ventilation was good and that it was the duty of the overmen to see that the brattices were properly put up.

The justices found as a fact that in view of all the circumstances, and in particular having regard to the fact of the abnormal dangers attending the working of this mine and of the inability of the manager to descend the mine, the agent had not taken all reasonable means under this section. This conviction was upheld.

"Apart from section 50," said Buckley, L.J., in *David v. Britannic Merthyr Co* [1909], 2 K.B. at p. 166, "I think that section 49 creates a statutory duty in the owner to observe, not only some, but all the rules therein contained; and I think this is a statutory duty in the owner towards the workman."

Statutory duty.—The criminal liability of the owner, agent, and manager is limited by section 102 (1), (2), and (3), p. 172. The civil liability of the owner is by section 102 (8), p. 174.

30. *Classification of mines for purposes of ventilation.*—

(1) General regulations under this Act shall provide for the classification of mines according to the amount of the inflammable and noxious gases in the main return airway, and the amount of air passing into a mine shall not be less than such amount as may be prescribed by the general regulations as respects mines of the class to which the mine belongs.

(2) The obligation imposed by this section shall be in addition to, and not in substitution for, the obligation to provide an adequate amount of ventilation imposed by the last foregoing section.

This section is entirely new.

31. *Requirements as to the use of certain methods of ventilation*—(1) Where a fire is used for ventilation in any mine, the return air shall be carried off clear of the fire by means of a dumb drift or airway, unless the mine is one in which inflammable gas is unknown.

(2) Where a mechanical contrivance for ventilation is used at any mine, it shall not be placed beneath the surface :

Provided that this provision shall not be construed as preventing mechanical contrivances for ventilation being placed underground either—

- (a) when such contrivances are auxiliary only and the contrivance whereby the main ventilation is produced is placed on the surface and is capable of producing such amount of ventilation as, in an emergency, would be sufficient for the safety of the persons employed underground ; or
- (b) when such contrivances afford a complete additional system of ventilation, and when a complete ventilating appliance is provided on the surface capable of producing such sufficient amount of

ventilation as aforesaid and immediately available for use in the event of accident, and is kept in an effective condition and is used once at least in each week.

(3) After the first day of January, nineteen hundred and thirteen, or such later date as, in view of the circumstances of the mine, may be fixed by the inspector of the division, there shall, in every mine in which a mechanical contrivance for ventilation is used, be provided and maintained in a condition to be put into immediate operation adequate means for reversing the air current.

(4) No fire shall be used below ground for ventilation in any mine or seam newly opened after the passing of this Act, except in the case of a small mine, in which the upcast shaft contains no inflammable material

This section is substituted for rules 2 and 3 of section 49 of the Act of 1887. In future in mines opened after 1 July, 1912, no fires used below ground for ventilation will be allowed.

SAFETY LAMPS

32 *Use of safety lamps in certain places.*—(1) No lamp or light other than a locked safety lamp shall be allowed or used—

- (a) in any seam, where the air current in the return airway from any ventilating district in the seam is found normally to contain more than one-half per cent of inflammable gas ; or
- (b) in any seam (except in the main intake airways within two hundred yards from the shaft) in which an explosion of inflammable gas causing any personal injury whatever has occurred within the previous twelve months, unless an exemption is given by the Secretary of State on the ground that,

- on account of the special character of the mine,
- the use of safety lamps is not required ;
- (c) in any place in a mine in which there is likely to be any such quantity of inflammable gas as to render the use of naked lights dangerous ;
- (d) in any working near to or approaching a place in which there is likely to be an accumulation of inflammable gas ;
- (e) in any place where the use of safety lamps is required by the regulations of the mine .

Provided that—

- (1) subject always to the provisions of this Act and any regulations made thereunder as to the use of electricity in mines, electric lamps, if enclosed in air-tight fittings and having the lamp globes hermetically sealed may be used on main haulage roads or elsewhere within such limits as may be fixed by the regulations of the mine , and
- (ii) for the purpose of paragraph (b) of this subsection an explosion occurring before the commencement of this Act shall not be taken into account.

(2) When in pursuance of this Act or the regulations of the mine, the use of safety lamps has been introduced in any part of a ventilating district, it shall not be lawful to use naked lights in any other part of the same ventilating district situated between the place where such lamps are used and the return airway, except when the use of safety lamps in that part of the district was introduced as a temporary precaution, and the conditions are not such as to render necessary the introduction of the use of safety lamps throughout the district.

(3) Where, in pursuance of this Act or the regulations of the mine, the use of safety lamps has been introduced

otherwise than as a temporary precaution against apprehended danger in any part of a mine, no lamp or light, other than a locked safety lamp, shall subsequently be allowed or used in that part without the sanction of the inspector of the division, which sanction shall not be withheld unreasonably, and any question as to whether such sanction has been unreasonably withheld shall be determined in manner provided by this Act for settling disputes.

(4) The average percentage of inflammable gas found in six samples of air taken by an inspector in the air current in the return airway in the ventilating district at intervals of not less than a fortnight shall, for the purposes of this section, be deemed to be the percentage normally contained in the air.

(5) Where safety lamps are required, in pursuance of this section, to be used in any seam, they shall also be used in any cross-measure drift connected with that seam.

Safety lamps—With regard to the use of safety lamps, while Parliament has wisely refrained from prescribing any particular form of safety lamp, yet section 33 provides that the type of lamp must be approved by the Secretary of State in respect of the class of mines in which it is proposed to be used. The owner, agent, or manager is under the obligation to appoint a competent person to examine all lamps before being issued to and on return by the persons to whom they have been issued, and if he fail to do this and comply with the other provisions relating to safety lamps, he will be guilty of an offence against the Act. Where the manager had appointed such "competent person" and he had given out the lamps unlocked, the manager was held not to be liable (*Dickenson v. Fletcher*, 9 C.P. 1)

Ventilating district—This expression is defined by section 122, *post*, p. 195, as "any part of a seam having an independent intake airway commencing from a main intake airway and an independent return airway terminating at a main return airway."

Electricity—The restrictions on the use of electricity imposed by section 60, p. 94, do not apply to electric hand lamps, provided they are of a type approved for the time being.

Within such limits as may be fixed.—Subject to the restrictions of section 60 and other regulations thereunder, electric lamps as defined may by rule 78 of the General Regulations, dated 10 July, 1913, p. 229, be used within the following limits :—

(a) On main intake airways and haulage roads ventilated by intake air up to within 300 yards of the first working place at the working face which the air enters

(b) On main return airways within 300 yards of the bottom of the upcast shaft if that shaft is regularly used for the purpose of winding persons or minerals, but not within 300 yards of the last working place at the working face which the air leaves.

Sanction of inspector withheld—The mode by which disputes as to whether such sanction is unreasonably withheld are settled is provided by section 116, p. 185.

Statutory duty—For the observance of the provisions of this section the owner, together with all other persons concerned, is equally responsible. But his duty is qualified. By section 75 the owner, agent, or manager is not liable if he shows that he has taken all reasonable means by publishing and to the best of his power enforcing the regulations to prevent contravention or non-compliance. Their criminal liability is further limited by section 102 (1), (2), and (3), p. 172. The civil liability of the owner is limited by section 102 (8), p. 174. See also section 75 n., p. 112.

33 *Construction of safety lamps.*—Wherever safety lamps are required by this Act or the regulations of the mine to be used, no safety lamp shall, after the first day of January nineteen hundred and thirteen, be used by any person employed in the mine, unless it is provided by the owner of the mine, and is of a type for the time being approved, as respects the class of mines to which the mine belongs, by the Secretary of State.

This section replaces and greatly strengthens section 49, rule 9, of the Act of 1887, and section 5 (2) of the Act of 1896. Although the use of certain lamps is not forbidden, the use of lamps other than those of a type approved by the Secretary of State will not be permitted.

Approved type.—In pursuance of this section, certain types of safety lamps have already been approved by the Secretary of State. See S.R. and O., 1913, Nos. 69, 296, 431, 519, 713, 886; 1914, Nos. 316 and 345.

Regulations of the mine.—This expression means the general and special regulations issued and approved respectively by the Secretary of State in pursuance of sections 86 and 87, pp. 137-8.

Statutory duty.—The provision of safety lamps of an approved type by the owner falls within the definition of "standard arrangements of the mine," by Cozens-Hardy, M.R., in *David v. Britannic Merthyr Coal Co.* [1909], at p. 154, and that by Farwell, L.J., of "equipment" in *Watkins v. Naval Colliery Co.* [1911], 2 K.B. at p. 154, and this duty would consequently appear to be absolute.

The criminal liability of the owner is, however, limited by section 102 (1), (2), and (3), and his civil liability by section 102 (8), p. 172.

34. *Examination of safety lamps* —(1) In any mine or part of a mine in which safety lamps are required by this Act or the regulations of the mine to be used—

- (i) A safety lamp shall not be used, unless it has, since last in use, been thoroughly examined at the surface by a competent person appointed in writing by the manager for the purpose and found by him in safe working order and securely locked, and a record shall be kept of the men to whom the several lamps are given out :
- (ii) A competent person appointed in writing by the manager for the purpose shall also examine every lamp on its being returned, and, if on such examina-

- tion any lamp is found to be damaged, he shall record the nature of the damage in a book to be kept at the mine for the purpose, and the damage shall be deemed to have been due to the neglect or default of the person to whom the lamp was given out, unless he proves that the damage was due to no fault of his own and that he immediately gave notice of the damage to the fireman, examiner, or deputy, or some other official of the mine appointed in writing by the manager for the purpose.
- (iii) A safety lamp shall not be unlocked except at an appointed lamp station (which shall not be in a return airway) by a competent person appointed in writing by the manager for the purpose, nor, except in the case of electric hand lamps, shall it be relighted except by such a person at an appointed lamp station after examination by him, and no person other than such person as aforesaid shall have in his possession any contrivance for relighting or opening the lock of any safety lamp.
- (iv) No part of a safety lamp shall be removed by any person whilst the lamp is in ordinary use.

(2) Where, in any such mine or part of a mine as aforesaid, any damage is caused to a lamp through the neglect or default of the person to whom the lamp was given out, that person shall be guilty of an offence against this Act.

This section replaces, amplifies, and amends rules 10 and 11 of section 49 of the Act of 1887, and subsection 2 of section 5 of the Act of 1896.

Examination.—Lamps must now be examined “at the surface”, a record must be kept of the persons to whom they are given out and of the nature of any damage caused to the lamps.

A safety lamp may no longer be used for the purpose of

firing a shot, since by subsection iii. "a safety lamp shall not be unlocked except at an appointed lamp station."

Damage to lamps.—For this offence the person to whom the lamp has been given out is liable, by subsection 3 of section 101, to a fine not exceeding £5, or by subsection 4 to imprisonment, with or without hard labour, for a period not exceeding three months

Statutory duty—For the observance of the requirements of this section the owner, equally with all concerned, is responsible, but his duty is qualified. By section 75 the owner, agent, or manager is not liable if he shows that he has taken all reasonable means by publishing and to the best of his power enforcing the regulations to prevent contravention or non-compliance

In *Butler (or Black) v Fife Coal Co* [1912], A C at p 163, Lord Kinnear said these "rules are for the most part addressed not to the owner but to the working miner and managers underground. For example, I think it out of the question to hold that if a working collier neglects a specific direction as to the use of a safety lamp, or if he is found in particular parts of the mine with lucifer matches in his possession, that is a breach of an absolute duty imposed on the mine owner"

This criminal liability of the owner, agent, and manager is further limited by section 102 (1), (2), and (3), p 172

The civil liability of the owner is limited by section 102 (8), p 174. See also section 75 n, p 112

35. *Prohibition against possession of lucifer matches, etc.*—(1) In any mine or part of a mine in which safety lamps are required by this Act or the regulations of the mine to be used, no person shall have in his possession any lucifer match nor any apparatus of any kind for producing a light or spark except so far as may be authorized for the purpose of shot firing or relighting lamps by an order made by the Secretary of State, or any cigar, cigarette, pipe, or contrivance for smoking.

(2) The manager of a mine in which, or in any part of which, safety lamps are required by this Act or by the regulations of the mine to be used, shall, for the purpose of

ascertaining before the persons employed below ground in the mine or in the part of the mine, as the case may be, commence work whether they have in their possession any lucifer match or such apparatus as aforesaid or cigar, cigarette, pipe, or contrivance for smoking, cause either all those persons, or such of them as may be selected on a system approved by the inspector of the division, to be searched in the prescribed manner after or immediately before entering the mine or that part of the mine.

(3) No person shall search any workmen in pursuance of this section, unless he has previously given an opportunity to some two workmen employed in the mine to search himself, and no lucifer match, or such apparatus as aforesaid, and no cigar, cigarette, pipe, or contrivance for smoking, has been found on him.

(4) Any person who refuses to allow himself to be searched in accordance with the foregoing provision shall be guilty of an offence against this Act, and shall not be allowed to enter the mine, or the part of a mine, as the case may be, and any person who, on being searched, is found to have in his possession any of the articles prohibited under this section, shall be guilty of an offence against this Act.

Subsection 1 replaces with amendments subsection 4 of rule 10 of the Act of 1887. The rest of the section is entirely new.

Apparatus for relighting —By Order dated 24 October, 1912,¹ in pursuance of section 35 (1) the Secretary of State has authorized the use underground of apparatus for the relighting electrically of safety lamps, provided

- (1) the apparatus complies in all respects with the requirements of any rules or regulations in force for the time being with respect to the use of electricity under-

¹ Statutory Rules and Orders, 1912, No. 1628.

ground, and is used in accordance with the provisions of such rules or regulations and of the said Act,¹

- (2) the station where the apparatus is used shall not be within a distance of 200 yards of any part of the working face ;
- (3) when not in use the apparatus shall be kept securely locked and no person shall be given or have in his possession any key or contrivance for unlocking the apparatus, other than a person appointed in pursuance of section 34 (1) (iii) of the said Act.

Searched in prescribed manner.—The manner in which persons shall be searched for the purpose of ascertaining whether they have in their possession any article prohibited by subsection 2 is prescribed by Order dated 21 May, 1912,² as follows :—

- (1) The search shall be made by a person, or persons, appointed for the purpose in writing by the manager.
- (2) In the case of members of a shift the search shall be made in the presence of two or more members of the shift.
- (3) The search shall be made with due regard to propriety and so as to occasion the person searched as little inconvenience as possible.
- (4) The person conducting the search shall—
 - (a) search or turn out all pockets ,
 - (b) pass his hands over all clothing ;
 - (c) examine any article in the workman's possession.
- (5) If the person conducting the search suspects that the person searched is concealing any prohibited article, he shall detain him and as soon as possible refer the

¹ The chief provisions at present in force are as follows :—

- (1) A safety lamp (other than an electric hand lamp) must not be relighted except

<ol style="list-style-type: none"> (a) at an appointed station which must not be in a return airway (b) by a competent person appointed in writing by the manager for the purpose (c) after examination by the person appointed. 	}	Section 34 (1) (iii).
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The lamp must also be examined by the appointed person after being relighted and before being issued [Electricity Rules No 18 (e)]

² Statutory Rules and Orders, 1912, No. 5fo.

- matter to the manager, under-manager, or other official authorized by the manager for the purpose, who shall not allow the person to proceed to work until he has satisfied him that he has no prohibited article in his possession

Statutory duty.—See section 34, p 60.

SHAFTS AND WINDING

36. *Requirements as to shafts and outlets*—(1) There must be in every mine at least two shafts or outlets, with which every seam for the time being at work in the mine shall have a communication, so that such shafts or outlets shall afford separate means of ingress and egress available to the persons employed in every such seam, whether the shafts or outlets belong to the same mine or to more than one mine.

(2) Such two shafts or outlets must not at any point be nearer to one another than fifteen yards, and there shall be between them a communication not less than four feet wide and four feet high.

(3) Every part of a mine in which ten or more persons are employed at the same time shall be provided with at least two ways affording means of egress to the surface, and so arranged that, in the event of either becoming impassable at any point, the other will afford means of egress to the surface

(4) No person shall be precluded by any agreement from doing such acts as may be necessary for complying with the foregoing provisions of this section, or be liable under any contract to any injunction, damages, penalty, or forfeiture for doing such acts as may be necessary in order to comply therewith.

(5) The foregoing provisions of this section shall not apply—

- (1) in the case of a new mine or seam being opened—

(a) to any working for the purpose of making a communication between two or more shafts or outlets ; or

(b) to any working for the purpose of searching for or proving minerals ,

so long as not more than twenty persons are employed below ground at any one time in the whole of the different seams in connection with a single shaft or outlet ; nor

(ii) to any proved mine, so long as it is exempted by order of the Secretary of State on the ground either—

(a) that the quantity of mineral proved is not sufficient to repay the outlay which would be occasioned by sinking or making a second shaft or outlet, or by establishing communication with a second shaft or outlet, in any case where such communication existed and has become unavailable ; or

(b) that the workings in any seam of the mine have reached the boundary of the property or the extremity of the mineral field of which that seam is a part, and that it is expedient to work away the pillars already formed in course of the ordinary working, notwithstanding that one of the shafts or outlets may be cut off by so working away the pillars of that seam ;

and so long as not more than twenty persons are employed below ground at any one time in the whole of the different seams in connection with a single shaft or outlet ; nor

(iii) to any mine—

(a) while a shaft is being sunk, or an outlet being made ; or

(b) one of the shafts or outlets of which has become, by reason of some accident, unavailable for the use of the persons employed in the mine ; so long as the mine is exempted by order of the Secretary of State, and as the conditions (if any) annexed to the order of exemption are duly observed.

(6) The foregoing provisions of this section requiring the two shafts or outlets of a mine to be separated by a distance of not less than fifteen yards shall not apply to any mine which is provided with two shafts sunk before the first day of January eighteen hundred and sixty-five, and at that time separated by a distance of less than ten feet, or commenced to be sunk before the first day of January eighteen hundred and eighty-eight, and separated by a distance of ten feet or upwards, but less than fifteen yards.

(7) The foregoing provisions of this section as to the dimensions of the communication between two shafts or outlets shall not apply to any mine or class of mines for the time being exempted therefrom by order of the Secretary of State by reason of the thinness of the seams or other exigencies affecting that mine or class of mines, and so long as the conditions (if any) annexed to the order of exemption are duly observed

This section replaces sections 16 and 18 of the Act of 1887. Subsection 3 is entirely new.

The provisions of section 36 are subject to the limitations contained in subsection 5 (i) in the case of a new mine being opened , (ii) to any proved mine exempted on certain ground therein specified by the Secretary of State , (iii) to any mine exempted by the Secretary of State while certain works therein specified are being carried out or in case of accident to the shaft. Further, the provision requiring shafts or outlets to be separated by not less than 15 yards is subject to the exemptions set out in subsection 6, neither, by subsection

7, need the dimensions of the communication between two shafts or outlets be those prescribed by subsection 2, if the mine be exempted therefrom by the Secretary of State, "by reason of the thinness of the seams or other exigencies affecting that mine or class of mines." It should be observed that the term mine, by section 122, includes "every shaft in the course of being sunk and every level and inclined plane in the course of being driven."

Communications between the shafts and outlets must now be not less than four feet wide and four feet high, whether made before the Act of 1887 or not.

Statutory duty.—"Section 16," said Cozens-Hardy in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 153, "dealing with what I may describe as the standard arrangements of the mine, seems to impose direct obligation on the owner." This absolute duty can only be discharged by the owner showing that he comes within the provisions of section 102 (1), (2), and (3), p. 172. His civil liability is limited by section 102 (8), p. 174. See also section 75 n., p. 112.

37. *Fencing of shafts and entrances.*—(1) Every entrance to any place below ground in a mine which is not in actual use or course of working or extension shall be kept securely fenced across the whole width of the entrance, so as to prevent persons inadvertently entering the same.

(2) The top of every shaft which for the time being is out of use, or used only as a ventilating shaft, shall be kept securely fenced

(3) The top and bottom of every working, ventilating, or pumping shaft, and all entrances into the workings therefrom, shall be kept securely fenced, but this shall not be taken to forbid the temporary removal of the fence for the purpose of repairs or other operations if proper precautions are used.

This section replaces section 49, rules 6, 18, and 19 of the Act of 1887.

Securely fenced.—The fence must be an effective means of preventing persons inadvertently entering, and not a mere

bank of loose stones over which anyone might walk (*Simpson v. Moore*, 3 Coup. 26 [1874]).

Temporary removal of fence—In *Simmerton v. Merry*, 13 R. 1012 [1886], decided under the corresponding section 51 (14) of the Act of 1872, the gate of the fence was left temporarily open whilst those who had charge of it were removing a drunken man who wished to enter. The man returned, and, finding the gate again open, entered, fell down the shaft, and was killed. In the action, brought at the instance of the man's father, it was held that the owners were not liable in damages either under the statute or in common law, since, if the work of the pit was to be carried on, it was necessary from time to time to leave the gate open.

In *M'Gill v. Bowman*, 18 R. 206 [1890], where a shaft was being sunk deeper, there was no fencing but a covering table over the mouth of the pit. Tram-rails were laid up to the mouth, where there was a movable wooden block, which it was the duty of the pit-headman not to remove unless he was satisfied that the covering table was over the pit-mouth. Thinking the covering was in position, the pit-headman removed the block, and the bogie fell down the shaft and killed M'Gill.

It was held that the arrangement of the covering table and block was not in breach of the statutory rules.

Working shaft—See section 38 n, p. 68.

Statutory duty.—Both Fletcher Moulton and Buckley, L.JJ., in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. 146, considered rules 6, 18, and 19 of section 49 imposed duties upon the owner analogous to those imposed by section 5 of the Factory and Workshop Act, 1878. They considered the decision in *Groves v. Lord Wimborne* [1898], 2 Q.B. 402, conclusive.

"There was in that case," said Fletcher Moulton, L.J., "no suggestion of personal neglect or personal misconduct on the part of Lord Wimborne, the defendant. Both the original erection of the fencing and its maintenance were matters which he would naturally do through agents. But that did not prevent the obligation being one which was binding upon him or save him from being held liable for damages arising from the non-performance of a statutory duty."

This absolute duty can only be discharged by the owner showing that he is entitled to the protection of section 102 (1), (2), and (3), p. 172, and he can only escape civil damages by bringing himself within the proviso of section 102 (8), p. 174. See also section 75 n., p. 112.

38. *Securing of shafts*—Every working or pumping shaft and every such shaft in the course of being sunk shall be securely cased or lined, or otherwise made secure.

This section is much stricter than the corresponding rule 20 of section 49 of the Act of 1887. The application of the provisions is no longer confined to mines "where the natural strata are not safe." The provisions of the section apply to all mines irrespective of the condition of the strata. They are also now extended to all working or pumping shafts in the course of construction.

Working shaft.—This term was defined in *Foster v. North Hendre Mining Co* [1891], 1 Q.B. 71, decided under section 23, subsection 10, of the Metalliferous Mines Regulation Act, 1872. In this case the shaft of a lead mine had been completed, and a tunnel driven from the bottom for the purpose of arriving at the ore, but no ore had, in fact, been gotten.

"It is clear to my mind," said Hawkins, J., "that a shaft is at any rate a working shaft, in the sense in which this section is intended to apply, the moment the workmen are required to descend the shaft after it has been completed. It is unnecessary in this case to say whether a shaft would be a 'working shaft' before that moment. I am of opinion that, whether the workmen are required to descend the shaft for the purpose of getting ore which has already been found, or for the purpose of working in order to arrive at the ore, the mine is a working mine and the shaft is a working shaft within the meaning of section 23, subsection 10."

Statutory duty.—The duty of the owner is absolute (see note to previous section).

39. *Option of using downcast shaft.*—Where of the two shafts communicating with a seam one is a furnace shaft, and both shafts are provided with apparatus in use for raising and lowering persons, every person employed in

the seam shall, on giving reasonable notice, have the option of using the downcast shaft.

This section corresponds with section 49, rule 23, of the Act of 1887.

40. *Provision of winding apparatus.*—(1) Proper and separate apparatus for raising or lowering persons to or from the surface, of such a character as may be prescribed by the regulations of the mine, shall be kept at each of the two shafts or outlets required by the foregoing provisions of this Act, and at any other shaft or outlet for the time being in use for the purpose of ingress or egress, and such apparatus, if not in actual use, shall be constantly available for use, and no person shall, except for the purposes of sinking operations or for the purpose of examining or repairing the shafts or outlets or the machinery or appliances therein, or for the purpose of accompanying animals or bulky material which cannot be raised or lowered in a cage, or where a written exemption is given by the inspector of the division, be raised or lowered otherwise than in a cage constructed in accordance with the provisions of this section :

Provided that this subsection shall not apply to any outlet by which persons can walk into or out of the mine otherwise than by ladders.

(2) Where the apparatus ordinarily used for raising or lowering persons to or from the surface is worked by mechanical power it shall, if the shaft is vertical, be provided with a detaching hook, and, if the shaft is more than one hundred yards in depth, shall also be provided with an effective automatic contrivance to prevent overwinding.

The provisions of this subsection shall not apply to any mine or class of mine which is exempted by the Secretary of State on the ground of the special circumstances of the mine or class of mine and shall come into operation on

the first day of July nineteen hundred and thirteen or such later date as, in view of the circumstances of the mine, may be fixed by the inspector of the division.

(3) Guides shall be provided in the case of every working shaft over fifty yards in depth, and, in the case of every shaft in the course of being sunk, over one hundred yards in depth, unless a written exemption is given by the inspector of the division.

(4) Keps for supporting the cage when at rest shall be provided at the surface level where mineral is usually unloaded, but shall not be provided at any intermediate landings in the shaft. The keps provided at the surface level, and also the keps, if any, provided at the bottom of the shaft, shall be used when persons are entering or leaving the cage.

The foregoing requirement as to the provision of keps shall not apply to a system of winding by means of a single rope where the cages are held by the friction of the rope on the winding sheave.

(5) Every winding rope shall be recapped at intervals of not more than six months in accordance with general regulations under this Act, and no winding rope which has been in use for more than three and a half years or which has been spliced shall be used for raising or lowering persons.

(6) Every engine used for raising or lowering persons shall be completely separated by a substantial partition from every other engine used for that purpose at the same time, and from machinery used for any purpose other than for raising or lowering persons, unless a written exemption is given by the inspector of the division.

(7) Every cage shall be provided with catches or other suitable contrivance to prevent tubs falling out, and, if used for lowering or raising persons, shall be covered in completely at the top and closed up at the two sides in a

sufficient manner to prevent persons or things from projecting beyond the sides, and shall be provided with suitable gates or other rigid fences and with a rigid hand-bar fixed in a position where it can be easily reached by all persons in the cage.

(8) Rods shall not be used for attaching a cage to the winding rope unless connected with the cage through the medium of an efficient spring.

(9) There shall be on the drum of every apparatus used for lowering or raising persons such flanges or horns, and also, if the drum is conical, such other appliances as shall effectively prevent the rope from slipping.

(10) Where the apparatus used for lowering or raising persons is worked by mechanical power, there shall be provided one or more brakes of sufficient power by themselves to hold the cage when loaded at any point in the shaft, and a proper indicator (in addition to any mark on the rope) showing to the person who works the machine, on a dial or in some sufficient manner, the position of the cage in the shaft and placed in such a position as to be easily seen by him at the same time as the marks on the rope.

If the drum is not on the crank shaft, there shall be an adequate brake on the drum shaft.

(11) No minerals, tubs, timber, or other materials, and no implements or tools other than scientific instruments, shall be raised or lowered whilst persons are being raised or lowered in the same shaft, whether in the same cage or not :

Provided that—

- (a) this subsection shall not apply in the case of men working in the shafts, or in the case of men accompanying animals or bulky materials which cannot be raised or lowered in a cage ; and

- (b) where a shaft is divided throughout by a substantial partition, each section of the shaft shall, for the purpose of the provisions of this subsection, be deemed to be a separate shaft.

The provisions of this section are largely new, and where they are not correspond with section 16 (1) c. and section 49, rules 25, 29, and 30 of the Act of 1887, which were said to impose an absolute statutory duty upon the owner in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. 146. This absolute duty can only be discharged by the owner showing that he is entitled to the protection of section 102 (1), (2), and (3), so far as criminal liability is concerned, and to that of section 102 (8), *post*, p. 172, so far as civil liability is concerned. See also section 75 n, *post*, p. 112.

Provision of brakes.—In *Watkins v. Naval Colliery Co.* [1911], 2 K.B. 162, a cage, whilst being lowered by a winding engine worked by steam, fell, killing and injuring a number of miners employed by the Company. The accident was occasioned, according to the verdict of the jury, by the inadequacy of the brake for the lowering of twenty-six men and by the defective condition of the spanner bar, which had been cracked and imperfectly repaired. The first was due to the negligence of the manager in directing that twenty-six men should be lowered in a cage originally provided for twenty only, and the second to an error of judgment on the part of the mechanical engineer.

It was held by the Court of Appeal that section 49, rule 30, of the Act of 1887, corresponding with subsection (10) of section 40, did not impose upon the defendants, as owners of the mine, an absolute unqualified obligation for any breach of which, resulting in personal injury to a miner, they would be liable in damages, but only an obligation to provide such a brake and such machinery as their expert manager should deem to be adequate, and that the defendants having supplied brakes and machinery which were adequate when supplied as part of the equipment of the mine, and having been themselves guilty of no negligence causing or contributing to the accident, were not liable.

"The reasonable construction of these rules," said Farwell, L.J., "is in my opinion that they are a direct enactment

on the owner to provide such a brake and such machinery as the expert manager shall deem necessary, and on the manager to see that such brake and machinery are adequate and to direct their use with reference to the extent of adequacy provided by him."

This decision was reversed by the House of Lords [1912], A.C. 693.

"The Act," said Haldane, L.C., "is divided into three parts. The first part imposes certain general conditions of employment in coal mines. The second part, which commences with section 49, enacts certain general rules, which are to be observed, as far as reasonably practicable, in every coal mine; and the third part contains provisions relating to legal proceedings and other supplemental matters. Section 16 provides that the owner of a mine shall not employ any person in the mine, or permit him to be there for the purpose of employment, unless, among other conditions, the following condition is complied with. Proper apparatus for raising and lowering persons at the shaft is to be kept on the works belonging to the mine, and such apparatus is to be constantly available for use.

"It is not disputed that this is a provision for the benefit of the workman, and that if it is broken he may therefore, if he can prove special damage, succeed in an action. The real question is whether it imposes an absolute obligation, to the breach of which it is no answer that the colliery company have not been personally negligent.

"I am of opinion that this is the true view and that no question of negligence or of the doctrine of common employment is relevant. The statute appears to me to impose a condition without qualification with which the colliery owners are bound to comply. I do not desire to be understood as dissenting from the view finally adopted by Pickford, J., that rule 30 of section 49 would in itself entitle the plaintiff to succeed. . . . I only wish to say that it does not appear to me necessary to resort to the general rules enacted under that section, because neither these rules nor any special rules made under section 51 for the guidance of those employed in the mine do, on the true construction of the Act, affect the conditions imposed by section 16. The latter section was referred to both before Pickford, J., and in the Court of Appeal, but sufficient attention was not paid to it. In my

opinion it is decisive of this case when it is applied to the facts found by the jury."

In *Nimmo v. Clarke*, 10 R. 477 [1872], decided under section 10, rule 12, of the Mines Regulation and Inspection Act, 1860,¹ it was held that the brake must be kept in proper working order. Nimmo was part owner and agent of the company. On two occasions he had given orders that the handle of the brake, which had been removed for repairs, should be replaced, but had neglected to see that his orders were carried out. It was also held that pumping gear, although it may operate as a self-acting brake, is not a "brake" within the meaning of the rule.

Character of winding apparatus.—In every mine which is not a small mine, and the shaft of which is more than 150 feet, the character of the winding apparatus to be used is prescribed by sections 79, 80, 81, and 82 of the General Regulations dated 10 July, 1913, p. 230

Recapping of winding ropes.—Rules for capping ropes are prescribed by sections 83, 84, 85, 86, 87, and 88 of the General Regulations dated 10 July, 1913, pp. 230-1.

Working shaft.—A shaft is a "working shaft" the moment the workmen are required to descend after it has been completed, whether minerals have been got or not. (*Foster v. North Hendre Mining Co.* [1891], 1 Q.B. 71; see section 38, p. 68).

41. *Means of signalling in shafts.*—Every working shaft and every shaft in the course of being sunk shall, if exceeding twenty-five yards in depth, be provided with some proper means of communicating distinct and definite signals from and to the bottom of the shaft, and from and to every entrance for the time being in use between the surface and the bottom of the shaft, to and from the surface.

This section is far stricter than the corresponding rule 25 of section 49 of the Act of 1887. Its provisions now apply to shafts in the course of construction; twenty-five yards in depth is substituted for fifty yards, and exemption by an inspector is no longer permitted.

¹ 23 & 24 Vict. c., 151.

Working shaft.—A shaft is a “working shaft” the moment the workmen are required to descend after it has been completed, whether minerals have been gotten or not (*Foster v. North Hendre Mining Co.* [1891], 1 Q.B. 71; see section 38, p. 68).

Statutory duty.—The provision of proper means of communication appears to impose an absolute duty upon the owner (see note to last section).

TRAVELLING ROADS AND HAULAGE

42. *Provisions as to travelling roads.*—(1) For every seam in a mine newly opened after the commencement of this Act and not being a mine exempted from this provision by general regulations under this Act, there shall be provided (except within such distance from the shaft as may be fixed by the regulations of the mine) two main intake airways, which shall be of such size and shall be maintained in such condition as to afford a ready means of ingress to and egress from the workings, and one of which shall not be used for the haulage of coal.

General regulations shall be made under this Act for determining the classes of mines which ought, having regard to their natural condition, to be exempted from the foregoing provision, and those regulations shall also provide for the exemption of any mine in which the number of persons employed underground does not at any one time exceed one hundred or which is naturally wet throughout.

(2) For every seam in a mine newly opened after the commencement of this Act which is exempted by general regulations from the foregoing provisions of this section, and for every seam in a mine opened before the passing of this Act, there shall be provided two main airways, which shall be of such size and shall be maintained in such condition as to afford a ready means of ingress to and egress from the workings.

(3) In the case of every mine or seam newly opened after the commencement of this Act, all stoppings between main intake airways and main return airways and all air-crossings shall so far as practicable be so constructed as not to be liable to be destroyed in the event of an explosion, and general regulations may be made under this Act providing for the manner in which such stoppings and air-crossings are to be constructed.

(4) Where, in the case of any mine or seam newly opened after the passing of this Act, the air-current in the main return airway is found normally to contain more than one-half per cent of inflammable gas, that airway shall not (except for the purpose of removing any coal gotten in the operation of enlarging or repairing the airway, or within a distance of three hundred yards from the shaft) be used for the haulage of coal.

For the purpose of this provision, the average percentage of inflammable gas found in six samples of air taken by an inspector in the air-current at intervals of not less than a fortnight shall be deemed to be the percentage normally contained in the air-current.

(5) In the case of every mine newly opened after the commencement of this Act, the main airways, if driven in the same seam, shall be so arranged that they shall not, at any point, except for the purpose of crossing, or within a distance of three hundred yards from the shafts, or such other distance from the shafts as may be fixed by the regulations of the mine, be less than such distances apart as shall be fixed by the regulations of the mine, and the distances from one another of the connections between the main airways shall not be less than the minimum distance specified in those regulations

Exemptions.—The provision in subsection 1, requiring two main intake airways, does apply to the classes of mines specified by section 89 of the General Regulations dated 10 July, 1913, pp. 231-2. This section is entirely new.

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If any question arises as to whether these exemptions apply, the dispute is to be settled in the manner provided by section 116 of the Act, p. 185

Main airway.—This expression in subsection 2 is defined by section 122 as an “airway commencing from or terminating at a shaft or outlet to the surface of any airway from which a split is taken to ventilate any district of the mine or into which a split so taken returns”

Construction of air-crossings.—The expression “so far as practicable” in subsection 3 means, “so far as is physically practicable.” It was held in *Wales v. Thomas*, 16 Q.B.D. 340 [1885], that the expression in section 51 of the Act of 1887 “so far as is reasonably practicable,” did not relate to the carrying on of the mine as a profitable concern, but to physical or engineering difficulties in the way of carrying out the rules enjoined by the section

The manner in which stoppings are to be constructed is prescribed by rule 91 of the General Regulations dated 10 July, 1913, p. 232.

General regulations.—By section 86 the Secretary of State may by order make such general regulations, referred to in subsection 3, as may appear best calculated to prevent dangerous accidents, and such regulations may vary or amend any of the provisions contained in Part II.

Inspector.—The term “inspector” in subsection 4 means a fireman, examiner, or deputy of a mine, whose duties of inspection are defined in sections 64 and 65, pp. 100–1.

43. *Provisions as to travelling on haulage roads, etc.*—
(1) On and after the first day of January, nineteen hundred and fourteen, no person, other than an official of the mine or a person employed on the road in connection with the haulage, or a person engaged in carrying out any repairing work requiring to be carried out forthwith, shall, while the haulage is in motion, travel on foot on any haulage road on which the haulage is worked by gravity or mechanical power, except—

- (a) Where there is provided on one side of the road a clear space of at least two feet in width between

the tubs and that side of the road, and the rate of haulage is not more than ten miles an hour ; or

- (b) Where, in the case of a haulage road in which such a clear space as aforesaid is not provided, the rate of haulage is not more than three miles an hour and the gradient does not exceed one in twelve, or in respect of any part of the road not exceeding one hundred yards in length, one in nine, and the space between the tracks of rail, where there is more than one track, is kept clear of obstructions :

Provided that—

(i) in the case of a haulage road in which such a clear space as aforesaid has been provided, but the space so provided has in some part of it been reduced to a width of less than two feet by reason of some cause over which the owner, agent, or manager of the mine has no control, the foregoing prohibition shall not apply during the time (not exceeding the time reasonably required for the purpose) during which the repairs necessary for restoring the width to two feet are being carried out ; and

(ii) the exception hereinbefore contained as respects haulage roads in which no such clear space as aforesaid is provided shall apply only in the case of mines opened before the commencement of this Act or mines in which the character of the strata makes it unreasonable to require such a clear space to be provided.

If any question arises as to whether the character of the strata in any mine makes it unreasonable to require a clear space to be provided, that question shall be determined in the manner provided by this Act for settling disputes.

(2). Where the haulage is worked by gravity or mechanical power, no person shall be allowed to ride on sets or trains of tubs except—

- (a) a person travelling on a set or train for the purpose of detaching or attaching tubs from or to the haulage rope, if that set or train is not proceeding at a higher speed than three miles an hour ; or
- (b) men being conveyed, with the written permission of the manager or under-manager, to or from their work at the commencement or end of their employment (including any person in charge of a set or train of tubs on which men are being so conveyed);
or
- (c) the driver of a locomotive.

(3) In all places where sets or trains consisting of three or more tubs are coupled or uncoupled, there shall be a clear space of at least two feet between tubs standing on any rails and the side of the road nearest to those rails :

Provided that—

- (a) where there are two parallel lines of rails, the foregoing provision shall not apply if there is a clear space of at least three feet between tubs standing on those rails ; and
- (b) where, in the case of any existing mine, compliance with the requirements of this subsection would necessitate the removal of arching or other masonry work, or where, in the case of any mine, sets or trains of tubs are coupled or uncoupled at the face, or at the pass-bye next the face, other provisions for securing safety may be substituted by the regulations of the mine for those requirements.

The provisions of this subsection shall come into operation on the first day of January, nineteen hundred and thirteen .

Provided that this subsection shall not apply to any district in any mine as respects which the Secretary of State is satisfied that it will be worked out within three years from the commencement of this Act.

(4) In measuring any clear space for the purposes of this section, any props or other supports of the roof projecting beyond the side of the road shall be deemed to form part of the side

Settlement of disputes.—The mode by which any question arising under section 1 (u) is to be determined is provided by section 116, p. 185.

44 *Provision of refuge holes* —(1) Every haulage road on which the haulage is worked by gravity or mechanical power, shall be provided with sufficient refuge holes at intervals of not more than ten yards, but, if the gradient does not exceed one in twenty, and either such a clear space as aforesaid is provided or the rate of haulage is not more than three miles an hour, it shall be sufficient if the intervals are not more than twenty yards.

(2) Every haulage road on which the haulage is worked by animal power shall be provided with sufficient refuge holes at intervals of not more than twenty-five yards.

(3) Every refuge hole shall be—

(a) as near as may be three feet in width and not less than four feet in depth ,

(b) not less in height than the height of the haulage road at the point where the hole is, or six feet, whichever is the less ;

(c) if such a clear space as aforesaid is provided, on the same side of the road as that space ;

(d) if no such clear space as aforesaid is provided, on

- the same side of the road as the other refuge holes, or where the road is on a curve, on the outer side of the curve ;
- (e) marked with a distinctive number ;
- (f) if necessary to make it readily visible, constantly kept whitewashed both inside and for a distance of not less than one foot round the aperture ;
- (g) kept clean.

(4) Nothing shall be placed in any refuge hole or across the entrance thereto so as to impede ingress.

(5) Notwithstanding anything in this section, it shall not be necessary to provide refuge holes on any road within twenty-five yards of the working face.

This section replaces, with important additions, section 49, rules 14, 15, and 16 of the Act of 1887.

Refuge holes under subsection 1—It appears, from the judgment in *Wilson v. Wishaw Coal Co.*, 10 R. 1021 [1883], decided under section 51, rule 10, of the Coal Mines Regulation Act, 1872, that the man-holes required under that section to be at intervals of not more than twenty yards, need not be at that distance on each side of the road. It also appears that where the plane is divided by a wall or other obstruction so as to make two passages, although such wall or obstruction may have been partially removed, each passage constitutes a separate plane.

Refuge holes under subsection 2—It was said by Lord Justice Clerk Macdonald, in *Hughes v. Clyde Coal Co.*, 19 R. 343 [1891], that in his opinion the mouths of cross-roads which led off the main level of a mine, and which were within fifty yards of each other, were to be considered as "man-holes or places of refuge" within the meaning of rule 15.

It will be noticed that the distance between the refuge holes is now reduced to twenty-five yards, and that the provisions relating to the refuge holes are more specific.

45. *Dimensions of travelling roads*—(1) Every travelling road shall be of adequate height, and, if the height

of any such road appears to the inspector of the division to be inadequate, he may require that the height be increased to such extent as he thinks proper, and the manager shall comply with the requisition unless he disputes the reasonableness thereof, in which case the dispute shall be settled in manner provided by this Act for settling disputes.

(2) Every road on which a horse or other animal is used underground or by which it has to pass to get to its work shall be of sufficient dimensions to allow the horse or other animal to pass without rubbing itself or its harness against the roof or sides of the bars or props supporting the roof or sides.

Settlement of disputes—The mode in which disputes under this section are to be settled is provided by section 116, p. 185.

46. *Apparatus on haulage roads*.—(1) Every rope used for haulage which is capped shall be recapped at intervals of not more than six months in accordance with general regulations under this Act.

(2) Sufficient and suitable sprags, lockers, or drags shall be provided and used for the purpose of holding a tub or set of tubs—

- (a) at the top of every incline on which the haulage is worked by gravity ;
- (b) at every place where sets or trains consisting of three or more tubs are coupled or uncoupled ;
- (c) on all roads or parts of roads where the gradient exceeds one in twenty, and the haulage is worked by animal power.

(3) Stop blocks or other similar contrivances shall be provided at the top of every incline on which the haulage, not being endless-rope or endless-chain haulage, is worked by gravity, and at every entrance thereto by which tubs are brought on to the incline. .

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(4) On every haulage road where mechanical haulage, not being endless-rope or endless-chain haulage, is used, and where the gradient exceeds one in twelve—

- (a) runaway switches or other suitable contrivances shall be provided where the use thereof is practicable to prevent accidents in the event of a tub running away ;
- (b) there shall be provided and attached to an ascending tub or set of tubs a backstay or other suitable contrivance for preventing the tub running back ;
- (c) over-chains, bridle-chains, or other suitable appliances shall be provided to prevent tubs in which persons are being conveyed from becoming disconnected and running away.

This section is entirely new.

Capping of hauling ropes.—Rules for capping ropes are prescribed by rules 83 and 88 of the General Regulations, dated 10 July, 1913, pp 230-1.

Mechanical haulage.—It was held in *Soutar v Reid* [1913] S.C. (J.) 84, that a system of haulage in use in a mine, by which an empty tub was drawn up an incline by the weight of a loaded tub descending on a parallel set of rails and attached to the empty tub by a chain passing round a pulley situated at the top of the incline, was not a system of "mechanical haulage" within the meaning of section 46 (4), and that the owners were not bound to provide certain safeguards, such as "backstays or other suitable contrivances, for preventing the tub from running back."

This conclusion was arrived at by looking at the section as a whole, which recognizes three different systems of haulage, viz. animal haulage, haulage by gravity, and mechanical haulage.

47. *Clearance of haulage roads.*—Every haulage road shall be kept clear as far as possible of pieces of coal and other obstructions

This section is entirely new.

48. *Provision of means of signalling.*—Every haulage road on which persons travel and on which the haulage is worked by gravity or mechanical power shall be provided (if exceeding thirty yards in length) with some proper means of communicating distinct and definite signals between all regular stopping places and the ends of the road.

This section reproduces the first part of rule 14 of section 49 of the Act of 1887, with the substitution of the words "all regular stopping places" for "the stopping places."

SUPPORT OF ROOFS AND SIDES

49. *Securing of roofs and sides.*—The roof and sides of every travelling road and working place shall be made secure, and a person shall not, unless appointed for the purpose of exploring or repairing, travel on or work in any travelling road or working place which is not so made secure.

This section is a reproduction of rule 21 of section 49 of the Act of 1887.

Statutory duty —Where a fall of shale from the roof of a road in a mine had taken place, and nothing was done to support the roof at this place, and where, by a subsequent fall at the same place, a miner was injured, it was held in *Bett v Dalmeny Oil Co., Ltd.*, 7 F. 787 [1905], that (1) the duty of supporting the roof is a statutory duty of the owner, and in case of neglect it is no answer to say that the owner has delegated the performance of that duty to a competent manager and supplied him with the material necessary for the support of the roof, and (2) that since this duty is imposed on the owner by the statute, the defence of common employment is not open to him, and he is consequently liable in civil damages.

It is doubtful whether, in view of more recent decisions, this case is any longer of authority. It does, however, establish that the statutory duty of the owner is unqualified, and he can now only discharge this liability by showing that he comes within the protection of section 102 (1), (2), and (3)

as to criminal liability, and within that of section 102 (8), p. 172, as to civil liability. See also section 75 n, p. 112.

50. *Systematic support of roof and sides.*—(1) Where props or props and bars or chocks are used to support the roof at the working face, the roof under which any work of getting coal or filling tubs is carried on shall be systematically and adequately supported, and the props or chocks shall be set at such regular intervals and in such manner as may be specified in the notice hereinafter mentioned.

(2) Holing props or sprags shall be set as soon as practicable, and shall be set at such regular intervals and in such manner as may be specified in the notice hereinafter mentioned, and shall not be removed until the coal is about to be taken down and before the roof supports (if any) have been advanced in the manner specified in the notice.

(3) In all parts of a roadway in which sets or trains consisting of three or more tubs are coupled or uncoupled, the roof and sides shall be systematically and adequately supported, and in such parts and in all other parts of the roadway the roof or sides which require to be supported, if props or bars are used as supports, such supports shall be set at such regular intervals and in such manner as may be specified in the notice hereinafter mentioned.

(4) The manager shall, by notice, specify the manner in which the supports are to be set and advanced, and the maximum intervals to be observed on roadways between the supports, and at the face—

- (a) between each row of props ;
- (b) between adjacent props in the same row ;
- (c) between the front row of props and the face ;
- (d) between the holing props or sprags ,
- (e) between chocks

Provided that the interval between holing props or sprags shall in no case exceed six feet.

(5) If the inspector of the division considers that the system of supporting the roof and sides adopted in any part of a mine is unsatisfactory, either by reason of the distances fixed or any of them being excessive or otherwise, he may require the manager to fix some less distance or otherwise modify the system, and the manager shall comply with the requisition unless he disputes the reasonableness thereof, in which case the dispute shall be settled in manner provided by this Act for settling disputes.

(6) This section shall not apply to the mines of stratified ironstone in the Cleveland district or of thick coal in the South Staffordshire district or to mines in any other district as respects which the Secretary of State is satisfied that similar conditions prevail.

(7) Nothing in this section shall prevent a workman from setting supports in his working place at more frequent intervals than those specified in the notice aforesaid, where necessary for safety.

This section is in substitution for section 49, rule 22, and contains many new and important provisions, which follow very closely the special rules established in various coal fields as the result of the agreement reached by the Mining Association of Great Britain, as the basis for special rules as to timbering. The main direction in which these rules marked an advance lay in the recognition of the principle of systematic timbering, which had been adopted with marked success by many colliery owners before the rules were established.¹

Settlement of disputes—The mode in which disputes under this section are to be settled is provided by section 116, p. 185.

51. *Supply of props and bars*.—Where, the work of

¹ Royal Commission (Mines) Second Report, 1909. Parl. Pap., Vol. XXXIV, p. 142.

erecting the supports of the roof and sides of working places is done by the workmen employed therein, a sufficient supply of timber or other materials suitable for supports shall be kept at or within ten yards of every working place where, in pursuance of this Act, supports are required to be erected, and also at the pass-bye, siding, or other similar place in the mine convenient to the workmen, and it shall be the duty of the firemen, examiners, or deputies to see that such sufficient supply is so kept, and any working-place in which such a sufficient supply is not kept shall not be deemed to be safe for the purpose of the provisions of this Act. Sufficient timber or other materials as aforesaid, to enable the firemen, examiners, or deputies to see that the provisions of this section are complied with shall be constantly provided.

This section re-enacts and very materially strengthens section 49, rule 22, of the Act of 1887.

Where they are required means where they are "necessary." Whether they are necessary or not is a question of fact. (*Gibbon v. Phillips*, 64 L.J.M.C. 42.)

52. *Withdrawal and removal of supports.*—(1) In any part of a mine where any work is being carried out which necessitates the removal of roof supports, temporary supports shall, in all cases, be set so as to secure the safety of the persons employed.

(2) Props shall not be withdrawn from the waste or goaf or from under a roof which appears to a fireman, examiner, or deputy to be insecure otherwise than by means of a safety contrivance, and it shall be the duty of the firemen, examiners, and deputies to examine all roofs from under which props are about to be withdrawn with a view to determining whether the props ought to be withdrawn by means of a safety contrivance.

This section is entirely new.

SIGNALLING

53. *Signalling*.—(1) The general code of signals in mines shall be such uniform code as may be prescribed by general regulations under this Act.

(2) There shall be in attendance at the top of every shaft by which any persons are about to be lowered into the mine a competent person for the purpose of receiving and transmitting signals, and, as long as persons are in the mine below ground, a competent person shall be in constant attendance for that purpose at the top of the shaft from which such persons are to be raised and, unless all the persons in the mine are officials or persons authorized in writing by the manager to give signals, at every entrance from the workings in which such persons are engaged into the shaft from which persons are raised.

(3) All signals, other than those relating to underground haulage, transmitted to the surface shall be transmitted simultaneously to the engineman and to the persons stationed as aforesaid at the top of the shaft.

This section is entirely new.

Code of signals.—By rules 92 to 97 inclusive of the General Regulations, dated 10 July, 1913,¹ pp. 233-4, the signals to be used in connection with winding in shafts are prescribed. These regulations come into force on 1 July, 1914. They do not apply to sinking pits.

By rules 98 to 102 inclusive of these general regulations, signals to be used in connection with underground haulage worked by gravity or mechanical power are prescribed, pp. 234-5.

54. *Telephonic communication*.—Such means of telephonic communication between different parts of a mine shall be provided as may be required by the regulations of the mine.

This section is entirely new.

¹ Statutory Rules and Orders, 1913, No. 748.

Telephonic communication.—By rule 103 of the General Regulations, dated 10 July, 1913, *post*, p. 235, the means required are prescribed.

PROVISIONS AS TO MACHINERY

55. *Fencing machinery.*—Every fly-wheel and all exposed and dangerous parts of the machinery used in or about the mine shall be kept securely fenced.

This section re-enacts rule 31 of section 49 of the Act of 1887.

Securely fenced—The duty to keep machinery securely fenced is similar to that imposed on the occupier of a factory by section 10 of the Factory and Workshop Act, 1901.¹ In *Groves v. Wimborne* [1898], 2 Q.B. 402, decided under the corresponding section 5 of the Factory and Workshop Act, 1878,² it was held by the Court of Appeal that the duty imposed on the occupier for neglect of this duty was absolute, that he was in consequence civilly liable in damages for injuries caused to his workman by such neglect, and that the doctrine of common employment is not applicable in such a case.

It was upon the analogy of the reasons given for the decision in this case to the facts in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. 146, that Fletcher Moulton and Buckley, L.J.J., decided that for a breach of rule 12 of section 49 of the Act of 1887, committed by the company's servants, the company were civilly liable for such breach, although there was no negligence on the part of the company.

Dealing with the doctrine of common employment, Fletcher Moulton said: "Whether one approves or rejects the invention of the defence of common employment by the Courts early in the last century, it is certain that the trend of legislation has been to do away with it, so that at the present moment it has but little effect in the case of most forms of employment. But long before the more recent legislation on this point, our industrial legislation as to factories, mines, etc., has been markedly in the direction of insisting upon the employer doing his duty towards his workmen, at least to the extent of a standard fixed by the law, and it seems to me that

¹ 1 Edw. VII, c. 22.

² 40 & 42 Vict. c. 16.

the legislature should make the breaches by him of the laws passed with this intent entail the like civil liability towards his own servants that they would towards third parties. This is all that my interpretation of the statute leads to, and I think, therefore, that there is no ground for suggesting that it lays any undue or abnormal burden on those who for profit own and work these dangerous undertakings "

Although the duty imposed on the owner is unqualified, he is entitled to the protection of section 102, both as to criminal and as to civil liability, if he can bring himself within the provisions of that section See p 174, and also section 75 n, p. 112

In *Corfield v Evans*¹ (decided in 1886 under section 51 of the Act of 1872), where a man was fatally injured while working at a chaff-cutting machine, not fenced as required, it was held that the owner, agent, and manager were all equally liable

Machinery—In *Corning v Burden*, 15 How 267, this is defined as "every mechanical device or combination of mechanical power and device to perform some function and a certain effect or result " See *Greenwood v Greenwood*, 24 T.L.R. 24 [1907]

56 *Boilers*—(1) Every steam boiler used for generating steam in or about a mine must, whether separate or one of a range—

- (a) have attached to it, a proper safety-valve, and also a proper steam-gauge and water-gauge, to show respectively the pressure of steam and the height of water in each boiler , and
- (b) be examined thoroughly by a competent person at least once in every fourteen months ; and
- (c) be cleaned out and examined internally, as far as the construction of the boiler will permit, by the person in charge of it once at least in every three months

¹ Reported, Royal Commission (Mines) Second Report Parl. Pap., Vol. XXXIV, p 230

(2) Every such boiler, safety-valve, steam-gauge, and water-gauge must be maintained in proper working condition, and all water-gauges shall be adequately protected by a covering or guard unless so constructed as to be equally safe to the persons employed whether so protected or not.

(3) A report of the result of every examination under this section in the prescribed form and containing the prescribed particulars, shall, within fourteen days, be entered into or attached to a book to be kept at the mine for the purpose, and the report shall be signed by the person making the examination, and, if that person is an inspector of a boiler-inspecting company or association, by the chief engineer of the company or association.

(4) The foregoing provisions of this section shall not apply to the boiler of any locomotive which belongs to and is used by any railway company.

(5) A steam boiler shall not be placed underground in any mine after the passing of this Act

This section reproduces in section 1, subsection (a), rule 32 of section 49 of the Act of 1887. The rest of the section is new.

Statutory duty—If the reasoning of Farwell, L. J., in *Watkins v. Naval Colliery Co.* [1911], 2 K.B at p 186, is to be accepted, the provision of safety-valves, etc., in accordance with the Act, by the owner, which he terms “equipment,” constituted an absolute duty on the owner, whilst their maintenance in proper working condition constituted a qualified duty only, i.e. provided the owner had appointed a duly qualified manager, the proper maintenance was a matter of management for the manager and not for the owner. But more than this is now required. To discharge his absolute duty, the owner must bring himself within the provisions of section 102 (1), (2), and (3), so far as his criminal liability is concerned, and within those of section 102 (8), p. 172, so far as his civil responsibility is concerned. See also section 75 n., p. 112.

57. *Appointment and duties of engineman.*—(1) A com-

petent male person not less than twenty-two years of age shall be appointed in writing by the manager for the purpose of working the machinery which is employed in lowering and raising persons from or to the surface, and a person so appointed for that purpose is in this Act referred to as a winding engineman.

(2) A winding engineman shall attend for the purpose aforesaid during the whole time that any person is below ground in the mine.

(3) After the prescribed date and except as may be provided by general regulations under this Act, a winding engineman shall not be employed for more than eight hours in any one day, and provision shall be made by general regulations for requiring particulars to be recorded in a book kept at the mine with respect to the hours of employment of winding enginemen.

(4) Where on any haulage road the haulage is effected by means of any machinery worked either by mechanical power or by animal or manual labour, the person in charge of such machinery, and, if persons are being conveyed, the person in charge of any part of the machinery, ropes, chains, or tackle connected therewith, must be a competent male person not less than eighteen years of age. The foregoing provision shall not apply in the case of machinery worked by an engine of not more than ten horse-power, and used for the purpose of hauling mineral from the face.

Where the machinery is worked by an animal, the person under whose direction the driver of the animal acts shall for the purposes of this section be deemed to be the person in charge of the machinery.

This section replaces rule 24 of section 49 of the Act of 1887, with some amendments and additions.

Appointment of engineman.—This now rests with the manager.

Duty of engineman.—"The engineman and no one else," said Lord Adam in *Soutar v. Clark*, 7 F. 1 [1904], "is to do the things prescribed, whether the engine is used for persons or material." In this case the engineman had allowed a person under twenty-two to work the engine for the purpose of raising and lowering materials. Special rule 20, in force at the pit by virtue of section 51 of the Act of 1887, provided that "the engineman was to remain in charge of and so near his engine as to have it completely and entirely under his control." "It is not a due compliance with these regulations," said Lord Kinnear, "for the engineman to remain and see what a lad under twenty-two appointed to assist him is doing. If he does so, there is a violation of the rules, and if the manager allows him to do so he fails to enforce the rules."

Prescribed date.—In pursuance of subsection 3, the Secretary of State, by Order dated 1 April, 1913, has prescribed that the date after which a winding engineman may not be employed for more than eight hours in any one day, except as provided by the general regulations, shall be 30 January, 1913.

General regulations.—The conditions under which a winding engineman may be employed for more than eight hours in any one day are contained in the General Regulations dated 1 April, 1913,¹ p. 262.

Statutory duty.—Rule 24 of section 49 was given by Cozens-Hardy, M.R., in *David v. Britanmic Merthyr Coal Co.* [1909], 2 K.B. at p. 154, as an example of an absolute statutory duty imposed upon the owner. This obligation can only be discharged by the owner showing that he is entitled to the protection of the provisions of section 102, p. 172. See also section 75 n., p. 112.

58. *Restriction on use of internal combustion engines in mines.*—Except with the permission of the Secretary of State, no internal combustion engine shall be newly introduced underground in any coal mine after the passing of this Act.

This section is entirely new.

59. *Egress from engine rooms, etc.*—Every steam engine

¹ Statutory Rules and Orders, 1913, No. 341.

room and boiler gallery and motor room in or about a mine shall be provided with at least two proper means of egress.

This section repeats substantially the last paragraph of section 47, rule 15, of the Act of 1887.

Statutory duty.—Rule 15 was given by Cozens-Hardy, M.R., in *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. at p. 154, as an example of the rules under section 49, which impose direct obligations on the owner. It is difficult to conceive how an owner could escape the consequences of a breach of this section even with the aid of section 102, p. 172. See also section 75 n., p. 112.

60. *Restrictions on the use of electricity* —(1) Electricity shall not be used in any part of a mine where, on account of the risk of explosion of gas or coal dust, the use of electricity would be dangerous to life, and, if the owner of a mine, on being required by an inspector of the division not to use, or to desist from using, electricity in the mine or any part thereof on such ground as aforesaid, refuses to do so, the question as to the application of this section to the mine or part thereof shall be settled in manner provided by this Act for settling disputes.

(2) If at any time in any place in the mine the percentage of inflammable gas in the general body of the air in that place is found to exceed one and a quarter, the electric current shall at once be cut off from all cables and other electrical apparatus in that place, and shall not be switched on again as long as the percentage of inflammable gas exceeds that amount: Provided that nothing in this subsection shall apply to any telephone or signalling wires or instruments as long as the conditions prescribed with reference to the installation and use of such wires and instruments are complied with, nor to any electric hand-lamps of a type for the time being approved.

(3) When any question under this section is to be settled in the manner provided by this Act for settling

disputes, the owner shall, pending the settlement of the question, comply with the requirement of the inspector subject to an appeal to the chief inspector

(4) The use of electricity in any mine shall be subject to general regulations under this Act.

This section is entirely new.

Settlement of disputes.—The mode by which disputes are to be determined is provided by section 116, p 185.

General regulations—For the general regulations relating to the use of electricity in mines, see Part III, rules 117 to 137 inclusive of the General Regulations, dated 10 July, 1913,¹ made by the Secretary of State under section 86 of the Act, pp. 238–50.

EXPLOSIVES

It will be observed that the elaborate provisions of the Act of 1887 as to the supply, use, and storage of explosives have been repealed and are under the present Act to be regulated by order of the Secretary of State. For form of annual return as to all particulars of explosives, see Schedule 1, Part c. 1, p. 205

61. *Explosives*—(1) The Secretary of State may, by order of which notice shall be given in such manner as he may direct, regulate the supply, use, and storage of any explosives at mines or any class of mines, and may, by any such order, prohibit the use of any explosive which appears to him of a kind to be or to be likely to become dangerous in mines or any class of mines, either absolutely or subject to such conditions as may be prescribed by the order.

(2) No explosives shall be taken into or used in any mine except explosives provided by the owner, and the price, if any, charged by the owner to the workman for any explosives so provided shall not exceed the actual net cost to the owner.

This section is substituted for section 49, rule 12, of the

¹ Statutory Rules and Orders, 1913, No. 748.

Act of 1887, and sections 5 (3), and 6 of the Act of 1896: subsection 2 is new.

Evidence of order and notice.—In *Jones v. Robson* [1901], 1 K.B. 673, upon the hearing of a summons against the manager of a mine for contravention of an order purporting to be made by a Secretary of State under section 6, a Queen's printers' copy of the order was put in evidence; but no evidence was given of any notice by the Secretary of State of the making of the order or of any direction by him as to the manner in which notice of the order should be given. It was held that the provisions as to notice were directory only, and were not conditions precedent to the coming into operation of the order, and that the order of the Secretary of State was consequently valid and binding.

Statutory duty of owner.—The observance of the rules as to the use of explosives by a mine owner would appear to be a qualified duty, that is to say a duty to take all reasonable means by publishing and to the best of his power enforcing the rules and regulations for the working of the mine, to prevent their contravention. In *David v. Britannic Merthyr Coal Co.* [1909], 2 K.B. 146, a workman was killed through an explosion caused by firing a shot in contravention of the rules. It was held, however, by the majority of the Court, that the company were civilly liable for the breach of duty imposed upon them without any proof of negligence being required.

Cozens-Hardy, M.R., dissented from the majority of the Court. He held that the owner's duty was only qualified. "Now the accident," said the learned judge, "from which the deceased collier met his death was due to a shot fired by authorized persons. I cannot hold that an owner who could not lawfully himself fire a shot or even direct the shotman when and where to fire a shot, can be held guilty of the offence of firing such shot. In other words, I think this particular duty was imposed not upon the owner but upon the shotman."¹

The House of Lords ordered a new trial on the ground that the burden of proving whether the mine authorities had done their duty in taking proper care of the safety of the miners lay upon the owners and not upon the injured workman. There was no re-trial, the case being settled.

In addition to the protection afforded by the limitation

¹ [1910] A.C. 74.

contained in section 75, p. 112, the owner, agent, and manager may escape criminal liability if they can bring themselves within the provisions of section 102 (1), (2), and (3), p. 172. The civil responsibility of the owner is governed by section 102 (8), p. 174.

By Explosives Act, 1875,¹ where a magazine or store is established for the purpose of any mine subject to the Coal Mines Acts by the owner, the Secretary of State may from time to time by order, direct an inspector to act as a Government inspector and may revoke any such order, and such inspector shall, while such order is in force, have for that purpose the same powers and authorities as he had under the said Acts and also the powers and authorities of a Government inspector under this Act

By section 11 of the Revenue Act, 1909, the amount of the fees payable in respect of licences for the importation of explosives, granted by the Home Secretary under section 40, subsection 9 of the Explosives Act, 1875, is fixed by Order in Council. This amount has now, by Order dated 10 January, 1910, been fixed at ten shillings for each two thousand pounds or part thereof, with a minimum fee of one pound in respect of any such licence.²

Statutory order as to explosives—In pursuance of the power conferred by this section, the following Orders have been made by the Secretary of State: No. 953, dated 1 September, No. 1187, dated 13 November, No. 1217, dated 25 November, 1913, No. 479, dated 7 April, No. 678 dated 13 May, 1914

Order 1217 and Order 479, repeal so much of the First Schedule of the Order of 1 September, 1913, as relates to the explosives "Standford Powder" and "Tutol No. 2."

These four Orders have been consolidated in the text, and the Order may now be used as one Order: see pp. 274 and 359.

Actual net cost—Where the owners had supplied to a miner explosives at a price which, over and above the amount attributable to the invoice price and the cost of carriage to the owner's magazine, included a proportion

- (1) of the cost of delivery from the magazine to the workmen ;

¹ 38 Vict. c. 17, s. 59.

² Statutory Rules and Orders, 1910, No. 67.

- (2) of the cost of attending to the magazine and of office expenses, and
- (3) of interest on the cost of erecting the magazine and of the licence in respect thereof,

it was held that the expression "actual net cost" includes the cost of carriage to the owner's magazine, but not the cost of distribution from the magazine to the workmen. (*Evans v. Gwendraeth Anthracite Colliery Co.* [1913], 3 K.B. 100.)

In the Divisional Court the owners did not claim the items of establishment charges, and this point was therefore not decided, but the principle upon which both learned judges proceeded was that "the actual net cost to the owner" means the cost at the time when the owner gets it into his possession, and that the cost between the time when he gets it and the time when he distributes it to the miners is rather expense of handling than cost of obtaining

PREVENTION OF COAL DUST

62. *Prevention of coal dust*—In every mine, unless the floor, roof, and sides of the roads are naturally wet throughout—

- (1) arrangements shall be made to prevent, as far as practicable, coal dust from the screens entering the downcast shaft; and, in the case of a mine newly opened after the passing of this Act, no plant for the screening or sorting of coal shall be situated within a distance of eighty yards from any downcast shaft unless a written exemption is given by the inspector of the division;
- (2) the tubs shall be so constructed and maintained as to prevent, as far as practicable, coal dust escaping through the sides, ends, or floor of the tubs, but any tub which was in use in any mine at the date of the passing of this Act may, notwithstanding that it is not so constructed, continue to be used in that mine for a period of five years from the said date;

- (3) the floor, roof, and sides of the roads shall be systematically cleared so as to prevent, as far as practicable, coal dust accumulating,
- (4) Such systematic steps, either by way of watering or otherwise, as may be laid down by the regulations of the mine shall be taken to prevent explosions of coal dust occurring or being carried along the roads ;
- (5) The roads shall be examined daily and a report (to be recorded in a book kept at the mine for the purpose) made on their condition as to coal dust and on the steps taken to mitigate danger arising therefrom.

This section is entirely new. The provisions in the Act of 1887 relating to the prevention of coal dust were contained in section 49, rule 12.

As far as practicable.—It has been thought by managers that the meaning of the subsection 3 was that the *clearing* of dust from the floor, roof, and sides should be carried out as far as practicable. The better view appears to be that the subsection requires the *systematic clearing* of the floor, roof, and sides, and that the words “as far as practicable” relate to the latter part of the sentence only, viz. to the prevention of the accumulation of coal dust.¹ Although it is admittedly practicable to prevent the accumulation of coal dust on the floor, it is contended that there is no system which will effectually clear the roof and sides. The most practicable system seems to lie in spraying the journeys of loaded trams with water at the farthest possible point in-by and at such intervals as may be necessary to keep the exposed coal damp until it reaches the surface,² and in removing the screens from the pitmouth

Practicable.—This means *physically* practicable; *Wales v. Thomas*, 16 Q.B.D. 340 [1885]

¹ Report on Explosion at Senghenydd Colliery, p. 33. Parl. Pap., Cd. 7346, 1914.
² *Ib.*, p. 45

INSPECTIONS AS TO SAFETY

63. *Appointment of stations.*—For the purpose of the inspections before the commencement of work in a shift hereinafter mentioned, one or more stations shall be appointed at the entrance to the mine or to different parts of the mine, as the case may require, and no workman shall pass beyond any such station until the part of the mine beyond that station has been examined and reported to be safe in manner hereinafter mentioned.

This section repeats substantially the first part of section 49, rule 4

Statutory duty.—The duty of observing the provisions of this section, imposed upon the owner, would appear to be a qualified one. *David v Britannic Merthyr Coal Co* [1909], 2 K.B. at p. 154, where Cozens-Hardy, M.R., says: "Section 49 states general rules which are to be observed, so far as is reasonably practicable, in every mine. Some of these rules obviously impose obligations . . . upon inspectors—for example, rules 4 and 5"

But if the owner had failed to appoint competent officials or such officials, although competent when appointed, had become incompetent, then the duty imposed upon the owner becomes absolute, and he is civilly liable for any damages caused by such incompetency (*Butler (or Black) v. Fife Coal Co* [1912], A.C. 149.)

Such absolute duty may be discharged by the owner bringing himself within the provisions of section 102, p. 172. See also section 75, p. 112.

64. *Inspections before commencing work*—(1) The firemen, examiners, or deputies of a mine shall, within such time not exceeding two hours immediately before the commencement of work in a shift as may be fixed by the regulations of the mine, inspect every part of the mine situated beyond the station or each of the stations, and in which workmen are to work or pass during that shift, and all working places in which work is temporarily stopped within any ventilating district in which the men

have to work, and shall ascertain the condition thereof so far as the presence of gas, ventilation, roof and sides, and general safety are concerned.

(2) Except in the case of a mine in which inflammable gas is unknown, the inspection shall be made with a locked safety lamp, and no other light shall be used during the inspection.

(3) A full and accurate report specifying whether or not, and where, if any, noxious or inflammable gas was found, and whether or not any, and, if any, what defects in roofs or sides and other sources of danger were observed, shall be recorded without delay in a book to be kept at the mine for the purpose, and accessible to the workmen, and such report shall be signed by, and, so far as the same does not consist of printed matter, shall be in the handwriting of, the person who made the inspection.

(4) For the purpose of the foregoing provisions of this section, two or more shifts succeeding one another so that work is carried on without any interval are to be deemed to be one shift

This section substantially reproduces part of rule 4 of section 49 of the Act of 1887 and section 5 (1) of the Act of 1896.

Statutory duty.—See note to section 63, p. 100.

Ventilating district.—This expression is defined by section 122, p. 195, as “any part of a seam having an independent intake airway commencing from a main intake airway, and an independent return airway terminating at a main return airway.”

Reports.—By section 17 (2), p. 31, copies of reports required to be made under this section must be posted up at the pit-head, not later than ten o'clock in the morning on the day following the day on which the reports are made and remain posted until ten o'clock in the morning on the following day.

65. *Inspections during shifts*—A similar inspection shall be made twice at least in the course of each shift of

all parts of the mine situated beyond the station or each of the stations aforesaid and in which workmen are to work or pass during that shift, but it shall not be necessary to record a report of the first of such inspections in a book : Provided that, in the case of a mine worked by a succession of shifts, no place shall remain uninspected for an interval of more than five hours.

This section is substituted for section 49, rule 4 (ii).

Reports.—By section 17 (1) a report of the second inspection must be recorded in a book to be kept at the mine, and by section 17 (2) copies of reports required under this section must be posted up at the pithead not later than ten o'clock in the morning on the day following the day on which the reports are made and remain posted until ten o'clock in the morning of the following day.

66. *Examination of machinery.*—Competent persons appointed by the manager for the purpose shall—

- (a) once at least in every twenty-four hours, examine thoroughly the state of the external parts of the machinery, the state of the guides in the shafts, and the state of the head gear, ropes, chains, cages, and other similar appliances of the mine which are in actual use for the purpose of raising or lowering persons in a mine ; and
- (b) once at least in every week, examine thoroughly the state of all other machinery, gear, and other appliances of the mine which are actually in use, whether above ground or below ground ; and
- (c) once at least in every week, examine thoroughly the state of the shafts in which persons are lowered or raised , and
- (d) once at least in every week, examine thoroughly the state of every airway in the mine ;

and shall make a full and accurate report of the result of

the examination, and every such report shall be recorded without delay in a book to be kept at the mine for the purpose and accessible to the workmen, and shall be signed by the person who made the examination

This section is substituted for section 49, rule 5, of the Act of 1887. The competent person is to be appointed by the manager, and not, as formerly, "by the owner, agent, or manager." Subsection (d) is new.

Statutory duty.—The duty imposed upon the owner would appear to be a qualified one (see section 63 n, p 100)

Report book.—This book is an official book, and must be kept in the office of the mine (see section 17 n., *ante*, p 31). The provision that such book shall be accessible to the workmen is new.

It was held in *Scott v Bould* [1895], 1 Q.B. 9, that rule 5 required a report to be recorded of the daily examination, as well as of the weekly examination. In this case the owner was held liable for the breach of the Act committed by "the competent person appointed for the purpose."

Copies of reports.—The posting of copies of reports would appear to be required by section 17 (2), but this requirement is not free from doubt. The provision that the book shall be accessible to the workmen may be intended in substitution of posting

Additional regulations for sinking.—In addition to the daily examination, by rule 172 of the General Regulations dated 10 July, 1913,¹ *post*, p. 258, the master sinker or competent person must once a day examine thoroughly the state of the shaft and of all the gear by which cradles, platforms, or pumps are slung or by which persons or material are raised or lowered.

WITHDRAWAL OF WORKMEN

67 *Withdrawal of workmen in case of danger.*—(1) If at any time it is found by the person for the time being in charge of the mine, or any part thereof, that, by reason of the prevalence of inflammable or noxious gases, or of any cause whatever, the mine or any place in the mine is

¹ Statutory Rules and Orders, 1913, No. 748.

dangerous, every workman shall be withdrawn from the mine or place found dangerous, and a fireman, examiner, or deputy, or other competent person authorized by the manager or under-manager for the purpose shall inspect the mine or place found dangerous, and, if the danger arises from inflammable gas, shall inspect the mine or place with a locked safety lamp, and in every case shall make a full and accurate report of the condition of the mine or place; and a workman shall not, except in so far as is necessary for inquiring into the cause of danger or for the removal thereof, or for exploration, be readmitted into the mine or place found dangerous, until the same is reported by the fireman, examiner, or deputy not to be dangerous.

(2) For the purposes of this section, a place shall be deemed to be dangerous if the percentage of inflammable gas in the general body of the air in that place is found to be two and a half or upwards, or, if situate in a part of a mine worked with naked lights, one and one-quarter or upwards.

(3) Every such report shall be recorded in a separate book which shall be kept at the mine for the purpose, and shall be signed by the person who made the inspection.

(4) If a workman discovers the presence of inflammable gas in his working place, he shall immediately withdraw therefrom and inform the fireman, examiner, or deputy.

This section is in substitution for section 49, rule 7, of the Act of 1887. It defines a place as dangerous if the percentage of gas in the general body of air thereof is as much as two and a half, and in a part of a mine worked by naked lights one and one-quarter. It imposes upon every workman the duty of withdrawing from a place where he finds inflammable gas and reporting the same, if he fail to do so he will be guilty of an offence.

Statutory duty.—The duty imposed upon the owner would appear to be a qualified one. In *Builer (or Black) v. Fife*

Coal Co. [1912], A.C. 149, decided under rule 4 (1), which provided for an inspection of the mine before the miners go to work, rule 7, which provided for a withdrawal of the men from a part of the mine which has become dangerous, and special rule 37, which provided for a written record being kept of the presence of noxious gases

In this case a miner was killed by an outbreak of poisonous gas whilst working in the company's colliery on 27 April, 1906. The pit in which he was working, No. 11 pit, was at the time ventilated by an air-current brought down the shaft of another pit (No. 1), with which it had been brought into connection in the previous year, and the accident was due to the formation of this connection. No. 1 pit contained a seam called Lochgilly Splint and Parrot Seam, which, according to the finding of the Court, is universally recognized to be specially liable to spontaneous combustion, and part of it was on fire in 1901. The fire area had been sealed up, but it was impossible, from the character of the workings, to be sure that the fire was quite extinguished; and in fact it was still smouldering when the connection with No. 11 was made. It appears that an underground fire in this condition may give off a gas called carbon monoxide, which is so poisonous that the presence of a very small quantity of it in the atmosphere will cause death. It is, however, a gas of very rare occurrence in mines; the learned judges say in their opinions, although it is expressly so found in the interlocutors that it is very difficult to detect its presence except by its effect on the system, since it has neither colour, taste, nor smell, and cannot be perceived by the senses. It was an escape of this deadly carbon monoxide gas, through leaks in the stoppings between No. 1 and No. 11 pit, which caused the death of the miner.

The possibility of the occurrences of these leakages, and the necessity for their repair when they occurred, was within the knowledge of the manager, the under-manager, and the fireman. It was found as a fact that "John Hunter, the under-manager, and John Gibbons, the fireman, were guilty of negligence in respect that, although for two days prior to the accident they were aware that a haze having a peculiar smell had appeared in the pit, and that several workmen had been seized with headache and sickness, they took no steps, by withdrawing the workmen or otherwise, to guard

against injury to those employed in the pit, until the cause of the haze and smell were discovered and removed."

It was further found that Hunter had failed to observe the provisions of rule 7, and Gibbons to observe those of rule 4 (1), rule 7, and special rule 37.

Hunter was "the person for the time being in charge of the mine," as Gray, the manager, was unwell and unable to go down the pit, and Gibbons was "the competent person authorized" to make the daily inspection and to make and record the reports.

It was also found that Gray had some theoretical knowledge of the proportion of carbon monoxide; that Hunter had had personal experience of the gas and of its effects, having been involved in the disaster at the company's pit at Hill of Beath in 1901, when six men lost their lives through carbon monoxide poisoning, but that Gibbons was ignorant of its characteristics and effects.

Further, that it would have been practicable (had such a danger been anticipated) for the company to have caused instructions to be given to Gray, Hunter, and Gibbons as to the symptoms and dangers of outbursts of carbon monoxide, and that the company did not take any means at the time when the connection between No. 1 and No. 11 pits was made, or thereafter, to secure that the knowledge and qualifications of the persons engaged in the supervision of the fireman were sufficient to enable them to deal with the special danger which might arise from a sudden outbreak of carbon monoxide gas.

Upon these facts, it was held by the House of Lords that there was a duty upon the mine owners to appoint and keep in charge persons competent to deal with the dangers arising in this mine, that they had not discharged this duty, and that they were therefore liable at common law in damages to the plaintiff.

"The true question," said Lord Kinnear, "appears to me to be, not whether the statute imposes an absolute duty with reference to each and every one of the specific rules which the 49th section contains, so that in case of contravention and in all circumstances the owners must be liable for any consequent injury, but the question is whether it imposes such a duty upon the mine owner personally as to preclude him from putting forward the defence of common employment."

In addition to the protection afforded by section 75, *post*, p. 112, the owner, agent, and manager may escape their criminal liability if they can bring themselves within the provisions of section 102 (1), (2), and (3), p. 172. The civil liability of the owner is now governed by section 102 (8), p. 174.

Or any cause whatever.—In *R. v. Spon Lane Colliery Co.*, 3 Q.B.D. 673 [1877], decided under section 46 and section 51, subsection 6, of the Act of 1872, the company were owners of a colliery in which was a perpendicular shaft at the same level as and communicating with a similar shaft in an adjoining colliery, of which they were not owners. The district inspector of mines gave notice, under section 46, to the defendants that an accumulation of water was in the shaft of the adjoining colliery which rendered their mine dangerous, and requiring them “forthwith to remedy the matter.” As the defendants had no power to interfere with the water in the adjoining shaft, it was held by the majority of the Court that the notice should have been given, under section 51, requiring the defendants to withdraw the workmen from the mine or such part of it as was found dangerous.

“So long,” said Miller, J., “as there is danger within subsection 6 arising from any cause whatever, although the owner cannot remedy it, he must not work the mine.”

MISCELLANEOUS PROVISIONS FOR SECURING SAFETY

68. *Water and bore-holes.*—Where any working has approached within forty yards of a place containing or likely to contain an accumulation of water or other liquid matter, or of disused workings (not being workings which have been examined and found to be free from accumulations of water or other liquid matter), the working shall not exceed eight feet in width, and there shall be constantly kept extending to a sufficient distance, not being less than five yards, in advance, at least one bore-hole near the centre of the working, and sufficient flank bore-holes on each side at intervals of not more than five yards.

This section re-enacts section 49, rule 13, of the Act of 1887, with the addition of the words within brackets.

69. *Storage and use of inflammable material below ground.*—(1) No oil, grease, canvas, or other highly inflammable material shall be stored below ground in any mine except in a fireproof receptacle or chamber.

(2) In any mine, being a mine newly opened after the passing of this Act and not being a small mine, no inflammable material likely to cause danger from fire to the persons employed below ground shall be used in the construction of the pithead frame or of the roof, if any, over the pithead.

(3) No inflammable material likely to cause danger from fire to the persons employed below ground shall, after the passing of this Act, be used in the construction of any engine-house below ground

Small mine—For definition, see section 122, p. 195.

This section is entirely new.

70 *Provision of means for extinguishing fire.*—At all parts of a mine where timber, grease, or other inflammable material is stored, and at all insets where timber is used for the construction of the staging, and at every pithead, steam-engine room, and boiler gallery in the construction of which timber is used, adequate means of extinguishing fire shall be provided.

This section is entirely new.

71. *Barometer, etc.*—(1) A barometer and thermometer shall be placed above ground in a conspicuous position near the entrance to the mine, and a hygrometer shall be placed below ground in a conspicuous position near a shaft or outlet both in the main intake airway and in the main return airway.

(2) The instruments required to be provided under this section shall be read at such intervals and by such persons as may be prescribed by general regulations, and the readings taken at the prescribed intervals shall

be entered in a book to be kept at the mine for the purpose.

The first sentence of this section repeats section 49, rule 33. The rest is new.

Prescribed regulations—The regulations relating to the reading of instruments and to the persons by whom such readings shall be taken are prescribed by rules 104 and 105 of the General Regulations dated 10 July, 1913,¹ p 235.

72 Wilful damage—No person shall wilfully damage, or without proper authority remove or render useless, any apparatus, appliance, or thing provided in any mine in compliance with this Act

This section is rather more general, and therefore wider, than the corresponding section 49, rule 35, of the Act of 1887.

Penalties for endangering safety—By subsection 4 of section 101, p 171, “when a person is guilty of any offence against this Act . . . which was likely to endanger the safety of the persons employed in or about the mine or to cause serious personal injury . . . or to cause a dangerous accident, and was committed wilfully by the personal act, personal default, or personal negligence of the person accused, such person shall be liable, if the Court is of opinion that a fine will not meet the circumstances of the case, to imprisonment, with or without hard labour, for a period not exceeding three months.”

Penalties for malicious injuries—The following penalties are provided by the Malicious Injuries to Property Act, 1861.²

Setting fire to coal mines—By section 26, “whosoever shall unlawfully and maliciously set fire to any mine of coal, cannel coal, anthracite, or mineral fuel, shall be guilty of felony, and, being convicted thereof, shall be liable, at the discretion of the Court, to penal servitude for life or for any term not less than three years,³ or to be imprisoned for any term not exceeding two years, with or without hard labour, and if a male under the age of sixteen years, with or without whipping.”

By section 27 the attempt by any overt act is a felony punishable by penal servitude for any term not exceeding

¹ Statutory Rules and Orders, 1913, No. 748

² 24 & 25 Vict. c 97.

fourteen and not less than three years,¹ or imprisonment not exceeding two years, with or without hard labour, and if a male under the age of sixteen years, with or without whipping

Conveying water into a mine.—By section 28, “whosoever shall unlawfully and maliciously cause any water to be conveyed or run into any mine or into any subterraneous passage communicating therewith with intent thereby to destroy or damage such mine or to hinder or delay the working thereof, or shall with like intent unlawfully and maliciously pull down, fill up, or obstruct or damage, with intent to destroy, obstruct, or render useless any waterway, drain, pit, level, or shaft of or belonging to any mine, shall be guilty of a felony, and being convicted thereof shall be liable, at the discretion of the Court, to be kept in penal servitude for any term not exceeding seven years and not less than three years,² or to be imprisoned for any term not exceeding two years, with or without hard labour, and if a male under the age of sixteen years, with or without whipping. Provided that this provision shall not extend to any damage committed underground by any owner of any adjoining mine in working the same or by any person duly employed in such working.”

In the case of *Reg. v. Simpson*, tried Winter Assizes (Durham), 1882, Matthew, J, held that there must be unequivocal evidence of the malicious intent to destroy, etc., in order to convict of the felony. In cases where the intent does not exist, the parties offending should be brought before the magistrates for breach of special or general rules, as the case may be.

Damaging steam engines, staiths, wagon-ways, etc., for working mines.—By section 29, “whosoever shall unlawfully and maliciously pull down or destroy or damage with intent to destroy or render useless, any steam engine or other engine for sinking, draining, ventilating, or working any mine or any appliance or apparatus in connection with any such steam or other engine or any staith, building, or erection used in conducting the business of any mine, or any bridge, wagon-way, or trunk for conveying minerals from any mine, whether such engine, staith, building, erection, bridge, wagon-way, or

¹ Increased to five by 27 & 28 Vict. c. 47, s. 2.

² Increased to five by 27 & 28 Vict. c. 47, s. 2.

trunk be completed or in an unfinished state, or shall unlawfully and maliciously stop, obstruct, or hinder the working of any such steam or other engine with intent thereby to destroy or damage any mine or to hinder, obstruct, or delay the working thereof, or shall unlawfully and maliciously wholly or partially cut through, sever, break or unfasten or damage, with intent to destroy or render useless any rope, chain, or tackle of whatsoever material the same shall be made, used in any mine, or in or upon any inclined plane, railway or other way or other work whatsoever in anywise belonging or appertaining to or connected with or employed in any mine or the working or business thereof, shall be guilty of felony," and liable to the same penalties as those provided in section 28.

73. Prohibition of inexperienced persons working alone as getters.—No person shall be allowed to work as a coal or ironstone getter otherwise than under the supervision of a skilled workman until he has had two years' experience of such work under such supervision, or unless he has been previously employed for two years in or about the face of the workings, nor shall a skilled workman have under his supervision at the same time more than one person who has not had such experience, or been so employed, as aforesaid.

This section reproduces section 49, rule 39, of the Act of 1887, with the addition of the last paragraph commencing with the words "nor shall a skilled workman."

Two years' experience—By section 102 (7), where there has been misrepresentation as to experience, and such misrepresentation was *bona fide* believed by the owner, agent, manager, or employer, the latter are exempt and the parent or guardian or the person making such misrepresentation is guilty of an offence under the Act and liable to the penalties imposed by section 102, p 174

74. Observance of directions.—Every person shall observe such directions with respect to working as may be given to him with a view to comply with this Part of this Act or the regulations of the mine or with a view to safety

This section corresponds with section 49, rule 36, of the Act of 1887. The last words, "or with a view to safety," are new

Regulations of the mine.—This expression means the general regulations issued by the Secretary of State under section 86, p. 137, and the special regulations issued by the mine owners and approved by the Secretary of State under section 87, p. 138.

75 *Penalties for non-compliance with provisions as to safety*—Any person who contravenes or does not comply with any of the provisions of this Part of this Act shall be guilty of an offence against this Act, and, in the event of any contravention of or non-compliance with any of the provisions of this Part of this Act by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means by publishing and to the best of his power enforcing those provisions to prevent that contravention or non-compliance

This section repeats section 50 of the Act of 1887.

Criminal liability.—Owners, agents, managers, and workmen are all alike liable to penalties for disobedience to the provisions as to safety contained in Part II of the Act

Statutory duty of workmen—"Mines," said Field, J., in *Frecheville v. Souden*, 48 L T. 612 [1883], decided under the analogous provisions of the Metalliferous Mines Regulation Act, 1892, "are to be worked in accordance with certain rules enforced by penalties, and the intention of the Act is to enforce those rules upon everybody" In this case some miners used a skip without a sufficient cover when being raised from the pit, in breach of a general rule of the Act They were convicted of an offence under the Act.

Statutory duty of owner, agent, and manager.—Under some of the provisions in this Part of the Act, the statutory duty of the owner, agent, or manager is, as we have seen, absolute, and for a breach of such provisions each is liable under the first part of this section.

These provisions were described by Buckley, L.J., in

David v. Britannic Merthyr Coal Co. [1909], 2 K.B. at p. 165, as those which relate to construction and which are analogous to the corresponding obligations under the Factory and Workshop Act, 1878. This description was considered by Farwell, L.J., in *Watkins v. Naval Colliery Co.* [1911], K.B. at p. 186, to be too narrow; he preferred the term "equipment," with which he contrasts the term "management," for a breach of the provisions relating to which he considered the statutory duty to be qualified. This classification, however, must be deemed faulty, since the failure to appoint and keep in charge only qualified managers may be a breach of an absolute duty (see *Builer (or Black) v. Fife Coal Co.* [1912], A.C. 149).

The description of these provisions by Cozens-Hardy, in *David v. Britannic Merthyr Coal Co.* sup. at p. 153, as "the standard arrangements of the mine" seems a happier definition, if indeed any distinction, which appears doubtful, can be made.

But where the statutory duty is qualified, if any of the rules have been violated or not observed by a person or persons other than the owner, agent, or manager, the latter, although prima facie guilty of an offence under this Part of the Act and thus made vicariously liable for the acts of others, may, under the latter part of section 75, escape from all liability. It is only necessary for them to establish that they have taken all reasonable means for publishing and to the best of their ability enforcing the provisions for the working of the mine contained in Part II, in order to protect themselves from this liability.

This defence against criminal responsibility, said Lord Atkinson in *Watkins v. Naval Colliery Co.* sup., is clearly also a defence against civil responsibility.

"In my view," said Cozens-Hardy in *David v. Britannic Merthyr Coal Co.* sup. at p. 154, "the section does not make the owner guilty of the same offence as that of which the actual contravener of the rules is guilty, and I find the nature of the owner's duty by reference to the last words of the section. If the owner is himself guilty of contravening a rule imposing a duty directly and expressly upon the owner, he is hit by the first part of the section. Otherwise he is protected against penalties by the latter part of the section, which latter part defines the nature and extent of his obligations. . . the

accident from which the deceased collier met his death was due to a shot fired by unauthorized persons. I cannot hold that an owner, who could not lawfully himself fire a shot, or even direct the shotman when and where to fire a shot, can be held guilty of the offence of firing such shot. In other words, I think this particular duty was imposed not upon the owner but upon the shotman. Unless, concluded the learned judge, this reasoning is correct, "the owner, although able to defend himself against a penalty under the section, if he can prove that he has taken all reasonable means to prevent a contravention or non-compliance with the rules, has no such right in a civil action like the present. I shrink from this conclusion."

A co-owner may be convicted without the conviction of the other co-owners (*R v Brown*, 7 E and B 757 [1857])

As long ago as 1879, under the corresponding sections of the Act of 1872, it was held in *Wythe v. Forrester*, 5 C.P.D. 361, that the agent of a mine may be convicted of an offence, although the mine is under the control of a duly certificated manager. See also *Stokes v. Checkland*, 68 L.T. 457 [1893], and *Anderson v. Atkinson*, 99 L.T. 22, p. 51.

By section 102 (2) the Legislature has now expressly determined that it is no defence by itself for the owner or agent to prove that a manager of the mine has been appointed in accordance with the Act.

Further, whether the statutory duty is absolute or qualified, by section 102 (1), *post*, p. 172, the owner or agent may escape liability not only under this Part of the Act, but generally, if he succeeds in proving to the satisfaction of the Court—

- (a) that he was not in the habit of taking, and did not in respect of the matters in question take any part in the management of the mine, and
- (b) that he had made all the financial and other provisions necessary to enable the manager to carry out his duties; and
- (c) that the offence was committed without his knowledge, consent, or connivance

This subsection is subject to the proviso in subsection 2, that the appointment of a qualified manager shall not in itself be a defence for the owner or agent.

By subsection 3 the owner, agent, and manager is not

liable for any contravention of or non-compliance with any provision of the Act "due to causes over which he had no control, and against the happening of which it was impracticable for him to make provision."

Civil liability of owner.—So far as the owner is concerned, his civil responsibility is protected by section 102 (8), p. 174, which provides that the owner "shall not be liable to an action for damages as for breach of statutory duty in respect of any contravention of or non-compliance with any of the provisions of this Act if it is shown that it was not reasonably practicable to avoid or prevent the breach."

What is *reasonably practicable* is a question of fact to be determined by the circumstances of the case, in the words of Farwell, L.J., in *Watkins v. Naval Colliery Co.* [1911], 2 K.B. at p. 185, "the practicability being measured both by the nature of the work and by the person made liable to perform it: for example, it is practicable and reasonable to compel all persons, whether owners, managers, workmen, or strangers, who descend into the pits to obey the regulations as to safety lamps and lucifer matches, but it would be absurd to hold the miner liable for the non-provision of a fence to open workings unless indeed he had been properly ordered to put it up and had neglected to do so."

"I think it out of the question to hold," said Lord Kinnear in *Butler (or Black) v. Fife Coal Co.* [1912], A.C. at p. 163, "that if a working collier neglects a specific direction as to the use of a safety lamp, or if he is found in particular parts of the mine with lucifer matches in his possession, that is a breach of an absolute duty imposed upon the mine owner."

This action was brought for breaches of section 49, rules 1, 4 (1), and 7 of the Act of 1887, and special rule 37. Rule 1, said Lord Shaw, "appears very clearly indeed to throw around workmen pursuing the hazardous calling of coal mining these two elementary protections: that the air of the workings shall be fit to breathe and the roads fit to travel without peril" (see section 29, *ante*, p. 49). Rule 4 (1) provided for a daily inspection by "a competent person," who should report at once as to noxious or inflammable gas or other source of danger, such report to be recorded in a book accessible to the workmen (see sections 63-66, *ante*, p. 100). Rule 7 prescribed withdrawal of the miner from the mine which had become dangerous (see section 67, *ante*, p. 103).

And the special rule 37 required the fireman to record without delay in a book accessible to the workmen before commencing work, where noxious or inflammable gas was found to be present. Breaches of all these rules by officials of the mine were found as a fact. The facts are stated on p. 105. "No one can peruse these," said Lord Shaw, "without being satisfied that, if it were possible to impute personality and knowledge to a limited company, the defenders must have been well aware that the particular coal measures there being worked were of a specially dangerous character, owing to the occurrence of fires and the escape of noxious and deadly gases . . . The case maybe figured of the most careful superintendence, the most complete compliance by the mine owners so far as they were concerned with every obligation resting upon them under the statute, of the settled order and management of the mine being in such a position that, unless disturbed, the statute would have been in all points complied with; and yet that such a disturbance took place by reason of something which—to put it in the language of another Act of Parliament—might be called the serious and wilful misconduct of some person engaged in the employment . . . when I come to the present case I find that it is in no respect whatever to be a case of the disturbance of the settled order and management of the mine, but upon the contrary, it is a case in which the judges have found that what did occur happened not by reason of any person interfering with the management, interposing something which caused the accident, but simply and solely in consequence of the equipment of the mine, in the sense of the staff charged with the performance of the statutory duties being insufficient; because the staff was entirely ignorant of what was necessary in gassy mines for the protection of human life. I cannot, my Lords, bring myself to think that such a state of matters as that is permissible without civil responsibility at common law, in face of a statute which has declared for the protection of the lives of the workmen in mines in this country that the air in which they work and travel shall be fit to breathe. . . . It is admitted that if the mine owner had been an individual managing his own pit—had been, as I suppose is possible, his own certificated manager—and ignorant of the requirements or dangers attending the working of those gas-bearing seams which formed part of the workings, his plea of ignorance

would have availed him nothing as a civil defence to a common law claim, and that the plain imperative of the statute bound him in the responsibility of providing his workmen with those protections which had been prescribed. But it is said that the owner can escape responsibility of his own dangerous ignorance by organizing the mine with a staff labouring under the same dangerous ignorance, and that although the former case would fall under the plain peremptory rule of the statute and its consequence, the latter forms an exception thereto

"My Lords, when one considers that nearly the whole, if not all, of the mines of this country are under delegated management, then this alleged exception to the imperative statutory rule is seen to be no exception, but to be equivalent to a destruction of the rule as a safeguard of life. It is argued that Law Courts must consent to this destruction, because the exception is the fruit of legal doctrine . . . The commanding principle in the construction of a statute passed to remedy the evils and to protect against dangers which confront or threaten persons or classes . . . is that, consistently with the actual language employed, the Act shall be interpreted in the sense favourable to making the remedy effective and the protection secure. . . . When this pit was turned, or possibly turned, into a gassy pit, then—if not before, certainly from that time onwards—the permitting of men without the requisite knowledge of gases and their dangers to be on the managing staff of the mine was an inexcusable neglect on the part of the owners."

And the owners were held liable because they failed to perform the duty imposed upon them for the safety of their workmen, inasmuch as they failed to take all reasonable means to the best of their power to prevent the contravention of rules which brought about the accident.

As Lord Kinnear pointed out, practicability is the test under the provisions of section 49, and it was found as a fact "that it would have been practicable (had such a danger been anticipated) for the defenders to cause instructions to be given to Gray, Hunter, and Gibbons as to the symptoms and dangers of an outburst of carbon monoxide, and that the defenders did not take any means at the time when the connection between No. 1 and No. 11 pits was made, or thereafter, to secure that the knowledge and qualifications

of the persons engaged in the supervision, and of the fireman, were sufficient to enable them to deal with the special danger which might arise from a sudden outbreak of carbon monoxide gas."

Common employment.—Where the duty is absolute, the liability is absolute also. Thus, if the obligation upon the owner is direct, he cannot rely upon the defence of the doctrine of common employment. "A master," said Cozens-Hardy in *David v. Britannic Merthyr Coal Co* sup at p. 152, "is not liable to one servant for the consequences of an accident caused to that servant by the negligence or breach of statutory duty of another servant. This is often spoken of as the doctrine of common employment. But on the other hand, a master is liable to his servant for the consequences of an accident caused to that servant by the breach of a statutory duty imposed directly or absolutely upon the master, and the master cannot shelter himself behind another servant to whom he has delegated the performance of the duty. In such a case the negligence is the master's negligence, and the doctrine of common employment has no application" (*Groves v Lord Wimborne*)¹

In the latter case, a case founded upon the neglect to keep machinery properly fenced in accordance with the Factory and Workshop Act, A. L. Smith, L.J., remarked: "There being an unqualified statutory obligation imposed upon the defendant, what answer can it be to an action for breach of the duty to say that his servant was guilty of negligence and therefore he was not liable? The defendant cannot shift his responsibility for the performance of his statutory duty on to the shoulders of another person." And Rigby, L.J., said: "There has been a failure in the performance of an absolute statutory duty, and there is no need for the plaintiff to allege or prove negligence on the part of any one in order to make out his course of action. That being so, the doctrine of common employment is out of the question."

In *Howells v. Landore Siemens Steel Co*, 10 Q.B. 62 [1874], a manager appointed under the Act of 1872 was held to be a servant, and consequently a fellow-servant of a miner, whose death was found to be due to his negligence. The owners were held not liable for the consequences of this negligence. "It is a rule of law," said Blackburn, J., "that the master

¹ [1898] 2 Q.B. 40.

who employs a servant (not an agent) is responsible for the negligence of that servant in matters in which he is employed ; but there is this exception, which has been established by a series of decisions, that with regard to a fellow-servant the master is held not so responsible ; because this negligence is to be taken as one of the ordinary risks which the servant contemplates and undertakes when entering into his employment."

So too in *Bett v. Dalmeny Oil Co., Ltd.*, 7 F. 787, the duty of making the roof secure, as required by section 49, rule 21, of the Act of 1887 (see section 49, *ante*, p. 84) was held to be absolute, although the owner had appointed a competent manager and had supplied him with adequate materials for the purpose in question "The duty of supporting the roof," said Lord McLaren, "is a statutory duty, and stands on a different plane from those duties which a master undertakes as implied conditions of the contract of service. The duty is not merely to provide a competent underground manager and to supply him with material for supporting the roof of the mine where necessary. The statutory duty of the mine owner is to give necessary support to the roof, and in my opinion it is not an answer to a case of neglect of that duty to say that the employer had delegated the performance of the duty to a competent manager"

"The true question," said Lord Kinnear in *Butler (or Black) v. Fife Coal Co* sup at p 162, "appears to me to be, not whether the statute imposes an absolute duty with reference to each and every one of the specific rules which the 49th section contains, so that in every case of contravention and in all circumstances the owners must be liable for any consequent injury, but the question is whether it imposes such a duty upon the mine owner personally as to preclude him from putting forward a defence of common employment. This is, of course, a perfectly well-established exception from the ordinary rule of law, which makes a master responsible for his servants, because it is held to be an implied term of the contract of service that the workman takes the risk of injuries arising from the negligence of other servants in the same employment. But that goes no farther than to relieve the master of liability to his servant, unless there be negligence on his part in that which he personally undertakes or is required by statute to do, for the benefit of the servant."

"The negligence of the persons in the employment of the respondents," said his lordship in a subsequent passage, "is the very cause of liability which the statute creates. They are to do their best in order to prevent persons in their employment from contravening the rules, and it is out of the question to say that it is a good defence to show that the direct cause of the injury was the negligence of their servants, which was the very thing they were bound to prevent if they did not do what was in their power to prevent it."

It must not be forgotten that the defence allowed under the second part of section 75, in the case of criminal liability, is open to mine owners against whom damages are claimed for injuries arising from breaches of any of the provisions of Part II of the Act.

Onus of proof—In *Butler (or Black) v. Fife Coal Co.* sup. at p. 166, Lord Kinnear clearly expressed the opinion of the House of Lords when he said that the case of *David v. Britannic Merthyr Coal Co.* sup. directly decided that "when an action had been brought for an injury caused by a contravention of the rules, the question as between the plaintiff and the mine owners was whether the contravention had happened notwithstanding that the mine owner had done all in his power to prevent its happening, and that the burden of proving that he had performed that duty was cast upon him, for the safety of his workmen lay upon the mine owner."

Serious and wilful misconduct—By the Workmen's Compensation Act, 1906,¹ if it is proved that the injury to a workman is attributable to the serious and wilful misconduct of that workman, any compensation claimed in respect of that injury shall be disallowed. It is not the province of a court to lay down that the breach of a rule is *prima facie* evidence of serious and wilful misconduct.

This is a question of fact in each case. Where the roof in a coal mine was dangerous and the deputy ordered the men, including the plaintiff, to prop it, which was done, but the men shortly afterwards, in order to carry on their work, removed the props and the plaintiff was injured, it was held that the disobedience of the plaintiff, although blameworthy, did not amount to serious and wilful misconduct. The Court of Appeal were also of opinion that it was not every offence

¹ 6 Edw VII, c 58, s. 1, subs. 2 (c)

against the general or special rules made under the Coal Mines Regulation Act which could be held in law to amount to serious and wilful misconduct. (*Rumboll v. Nunnery Colliery Co.*, 80 L T. 42, *McNicol v. Spiers Gibb and Co.*, 1 F 604.)

In the main haulage road of a mine were man-holes every twenty yards. A number of men were walking along the road when a "journey" of trams started behind them. The plaintiff was warned to get into one of the man-holes, but thinking he would get out of the road before the "journey" overtook him, he walked on and was knocked down by a wagon and killed. His walking on was held to be "serious and wilful misconduct" (*John v. Albion Coal Co.*, 18 T.L.R. 27). Under similar circumstances a miner was not struck by the "journey" of trams at all, but by the rope, which "swamped," i.e. came off its support and struck him. But for this the miner would have reached a man-hole. He was held not to have been guilty of "serious and wilful misconduct." *Rees v. Powell Duffryn Steam Coal Co.*, 64 J.P. 164. See also *Douglas v. United Mineral Mining Co., Ltd.*, *The Times*, 20 February, 1900; *Callaghan v. Maxwell*, 2 F. 420; *Dailly v. John Watson, Ltd.*, 2 F. 1044; *Logue v. Fullarton*, 3 F. 1006; *O'Hanlan v. Dundalk and Newry Steam Packet Co.*, 33 Ir L.T.R. 36, *MacNicholas v. Dawson* [1899], 1 Q.B. 773.

So too in *The United Collieries, Ltd. v. M'Ghee*, 6 F. 808 [1904], a miner in breach of rule 3 opened a gate fencing a shaft when the cage was not opposite the gate. It was found as a fact that the deceased, presumably through absent-mindedness, failed to notice the absence of the cage, and pushing the hutch from behind, followed it down the shaft and was killed. In *Dobson v. The United Collieries Co., Ltd.*, 43 Sc. L.R. 260, 8 F. 241 [1905], a miner in breach of rule 1 carried a naked light in his cap, which came in contact with a cartridge in his hand and caused an explosion, in which he was injured. His ignorance of the special rule was held to be no excuse.

In these cases the Scottish Courts have acted upon the principle that a breach of the statutory coal mines rules is *prima facie* evidence of serious and wilful misconduct.

In *O'Hara v. Cadzow Coal Co., Ltd.*, 5 F. 439 [1903], rule 9 of the additional special rules under the Coal Mines Regulation Act, 1887, was in force in the mine where the accident took place. In breach of this rule, the workman neglected

to put in sprags or holing props, in consequence of which the roof fell and one of the workmen was killed. It was held that his death was attributable to serious and wilful misconduct.

Both in *Brooker v. Warren*, 23 T.L.R. 201 [1906], where a workman who intentionally omitted to use a guard to a circular saw was in consequence killed, and in *Birt v. L. and S.W. Ry. Co.* [1907], A.C. 209, where an engine-driver, contrary to express orders not to leave the foot-plate, got upon the tender and was killed whilst passing under a bridge, their acts were held to be serious and wilful misconduct.

The facts in *George v. Glasgow Coal Co., Ltd.* [1909], A.C. 123, are similar to those in *The United Collieries, Ltd., v. M'Ghie*, with the exception that George had previously opened the gate when the cage had not stopped, and had been warned not to do so a day or two prior to the accident. It was urged on behalf of George that the Scottish Courts had gone too far in holding that every breach of a rule is evidence of serious and wilful misconduct. In holding George guilty of such misconduct, the House of Lords declared that it was not the province of a Court to lay down that the breach of a rule is *prima facie* evidence of serious and wilful misconduct. "That is," said Loughburn, L.C., "a question purely of fact to be determined by the arbitrator as such. The arbitrator must decide for himself, and ought not to be fettered by artificial presumptions of fact prescribed by a court of law."

PART III

PROVISIONS AS TO HEALTH

Sections 76 to 79 inclusive make provision for health and cleanliness, and are all new.

76 Provision as to sanitary conveniences—General regulations shall be made under this Act with respect to the provision and use of sanitary conveniences in mines, both above and below ground.

This section is in substitution of section 74 of the Act of 1887, which made applicable section 38 of the Public Health

Act, 1875,¹ in respect of sanitary accommodation above ground, where women and girls were employed.

General regulations.—In pursuance of the power conferred by section 86, *post*, p. 137, the Secretary of State has issued general regulations dealing with the provision of sanitary conveniences in mines below as well as above ground (see rules 106 to 112 inclusive of the General Regulations dated 10 July, 1913,² pp. 236–7.

77. *Provision of washing and drying accommodation.*—

(1) Where a majority, ascertained by ballot of two-thirds of the workmen employed in any mine to whom this section applies, represent to the owner of the mine that they desire that accommodation and facilities for taking baths and drying clothes should be provided at the mine and undertake to pay half the cost of the maintenance of the accommodation and facilities to be provided, the owner shall forthwith provide sufficient and suitable accommodation and facilities for such purposes as aforesaid

Provided that the owner shall not be bound to provide any such accommodation and facilities, if the estimated total cost of maintenance exceeds threepence per week for each workman liable to contribute under this section.

(2) General regulations shall be made under this Act for determining what are sufficient and suitable accommodation and facilities for the purposes of this section and any such regulations may make different requirements as respects different classes or descriptions of mines

(3) For the purposes of this section, cost of maintenance includes interest on capital expenditure (not exceeding five per cent per annum), and if any question arises as to the estimated cost of maintenance that question shall, in accordance with regulations as to procedure and costs

¹ 38 & 39 Vict. c. 55.

² Statutory Rules and Orders, 1913, No. 748

to be made by the Secretary of State, be referred to an arbitrator to be agreed upon between the parties, or, in default of agreement as to an arbitrator, to a person appointed by the judge of county courts for the district, or in Scotland by the sheriff of the county, in which the mine is situate, and the decision of the arbitrator or of the person so appointed, as the case may be, shall be final.

(4) Where any such accommodation and facilities have been provided, every workman at the mine to whom this section applies (whether he was or was not employed at the mine at the time when the ballot of the workmen for the purposes of this section was taken) shall be liable to contribute a sum equal to one-half of the cost of maintenance (but not exceeding three halfpence per man per week), and the owner shall be entitled to recover such contributions from the workmen liable to contribute by deduction from their wages, notwithstanding the provisions of any Acts relating to truck or any contract to the contrary.

Provided that the obligation to contribute shall not apply to any workman who is exempted on the ground of health in accordance with the regulations of the mine.

(5) The management of the accommodation and facilities provided under this section shall be under the control of a committee to be established in accordance with the regulations of the mine, and consisting as to one half of members appointed by the owner of the mine and as to the other half of members appointed by the workmen liable to contribute under this section. The powers and duties of the committee in relation to the management of the accommodation and facilities shall be such as may be laid down by general regulations, and the owner of the mine shall not be liable to any penalty as for failure to comply with the provisions of this section

in respect of any act performed by the committee in pursuance of their powers or of any failure by the committee to perform any of their duties.

(6) The workmen to whom this section applies are all workmen employed underground, and all workmen engaged on the surface in handling tubs, screening, sorting, or washing coal, or loading coal into wagons.

(7) This section shall not apply to any mine where the total number of the workmen employed at the mine to whom this section applies is less than one hundred, or to any mine held by the owner under a lease of which the unexpired term is less than ten years, or to any mine as respects which the Secretary of State is satisfied that it will be worked out within ten years.

(8) If the owner of any mine fails to comply with the provisions of this section, he shall be guilty of an offence against this Act.

(9) Where a majority, ascertained by ballot of two-thirds of the workmen at a mine, represent to the owner of the mine that they desire that this section should cease to have effect as respects the mine, this section shall, unless the owner by notice affixed at the mine within one month after the receipt by him of the representation declares that he does not assent thereto, cease to have effect accordingly as from a date to be agreed upon between the owner and the workmen.

(10) A fresh representation shall not be made as respects any mine either under subsection 1 or under subsection 9 of this section before the expiration of five years from the date of any previous representation made with respect to that mine.

Bathing accommodation.—In pursuance of the powers conferred by section 86, the Secretary of State has issued General Regulations, dated 29 Aug., 1913,¹ *post*, p. 267, dealing

¹ Statutory Rules and Orders, 1913, No. 950.

with the accommodation and facilities for taking baths and drying clothes

Cost of maintenance—General Regulations, dated 4 September, 1913,¹ have also been issued by the Secretary of State as to procedure and costs of reference where any question under subsection 3 arises as to the estimated cost of reference, *post*, p. 265

78. *Use of sprays when drilling silicious rock*.—A drill worked by mechanical power shall not be used for drilling in ganister, hard sandstone or other highly silicious rock, the dust from which is liable to give rise to fibroid phthisis, unless a water jet or spray or other means equally efficient is used to prevent the escape of dust into the air, and, if any person contravenes or fails to comply with the provisions of this section, he shall be guilty of an offence against this Act, and, in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means to prevent the contravention or non-compliance.

General regulations—In pursuance of section 86, p. 137, by Order dated 9 September, 1913,² the following general regulations applying to all mines in which ganister is worked have been issued :

1. During the process of drilling holes in ganister, water³ or other efficient means shall be used to prevent the escape of dust into the air.

2 After a shot has been fired in any place for the purpose of breaking ganister, no person shall return to that place until the air in such place has been cleared of the dust arising therefrom, or unless he uses an efficient respirator or other apparatus to prevent the inhalation of dust

Blasting of ganister shall as far as practicable be so arranged

¹ *Ib.*, No 955

² Statutory Rules and Orders, 1913, No 947.

³ When a drill worked by mechanical power is used, a water jet or spray or other means equally efficient must be used—*see* section 78 of the Coal Mines Act, 1911.

that men working in other places shall be exposed as little as possible to the dust.

3. No person shall, in any part of the mine, remove or cause or allow to be removed the stone broken, if dry and dusty, unless it has been effectively damped so as to prevent the escape of dust into the air during removal.

4. Except where the stone is so saturated that dust is not given off in the breaking, all stonebreaking machines used at the mine shall be provided and kept provided with an efficient watering or other arrangement to prevent the escape of dust into the air, and no person shall work, or cause or allow to be worked, any such machine unless such arrangement is provided and effectively used.

5. It shall be the duty of the manager to see that all appliances or other things necessary to enable the above regulations to be carried out, are provided and are maintained in working order.

6. It shall be the duty of all persons employed in the mine to comply with the requirements of the regulations, and with such instructions as shall be given to them by the officials with a view to such requirements being carried out, and it shall be the duty of all persons employed in the mine, whether workmen or officials of the mine, to report any breach of these regulations to the manager.

Statutory duty.—This section imposes a qualified duty upon the owner, agent, or manager. The latter and any person contravening the provisions of this section are liable to the penalties provided by subsection 3 of section 101, p. 171.

As to the criminal liability of each, see section 75, n. p. 112, and section 102, *post*, p. 172. The civil liability of the owner is limited by section 102 (8), p. 174.

79. *Notification of industrial diseases.*—Written notice of every case of any disease occurring in a mine and occasioned by the nature of the employment (being a disease specified in an order made by the Secretary of State for the purpose) shall forthwith be sent to the inspector of the division, and the provisions of this Act with respect to the notification of accidents shall apply

to any such case in like manner as to any such accident as is mentioned in those provisions:

Provided that a person shall not be liable to any penalty for failing to send notice under this section of any disease so specified, if he proves that he was not aware of the disease having occurred, and that he had taken all reasonable steps for having the occurrence of all such diseases brought to his notice.

Notification of disease.—This must be given to the inspector of the division in like manner as notices of accidents under section 80.

Statutory duty.—The duty imposed by section 80 is upon the owner, agent, and manager, the penalty for breach of which is provided by section 101, *post*, p. 171. This duty is qualified. Protection is afforded to all by the proviso of the section. By subsection 1 of section 102 the owner and agent are protected, and by subsection 3 the owner, agent, and manager, if the contravention or non-compliance was due to causes over which they had no control and against the happening of which it was impracticable for them to make provision (see section 75, p. 112).

PART IV

PROVISIONS AS TO ACCIDENTS

Sections 80 to 85 inclusive deal with provisions as to accidents, and the duties of owners, agents, managers, inspectors, and coroners in relation thereto.

NOTICES OF ACCIDENTS

80 *Notices of accidents.*—(1) Where, in or about any mine, whether above or below ground, any accident occurs which either—

- (i) causes loss of life to any person employed in or about the mine; or
- (ii) causes any fracture of the head or of any limb, or any dislocation of a limb, or any other serious

- : personal injury to any person employed in or about the mine ; or
- (iii) is caused by any explosion of gas or coal dust or any explosive, or by electricity, or by overwinding, or by any other such special cause as the Secretary of State specifies by order, and causes any personal injury whatever to any person employed in or about the mine ;

the owner, agent, or manager of the mine shall forthwith send notice in writing of the accident, and of any loss of life or personal injury caused thereby, to the inspector of the division, in such form and accompanied by such particulars as may be prescribed, and, in the case of an accident causing loss of life or serious personal injury, notice in such form and accompanied by such particulars as may be prescribed shall also be sent to the person (if any) nominated by the persons employed at the mine for the purpose of receiving notice under this section on their behalf.

(2) Where loss of life or serious personal injury has immediately resulted from an accident, the place where the accident occurred shall be left as it was immediately after the accident, until the expiration of at least three days after the sending of such notice as aforesaid of such accident, or until the visit of the place by an inspector whichever first happens, unless compliance with this enactment would tend to increase or continue a danger or would impede the working of the mine.

(3) Where any personal injury, of which notice is required to be sent under this section, results in the death of the person injured, notice in writing of the death shall be sent to the inspector of the division on behalf of a Secretary of State within twenty-four hours after such

death comes to the knowledge of the owner, agent, or manager.

(4) Every owner, agent, or manager who fails to act in compliance with this section shall be guilty of an offence against this Act

This section is in substitution for section 2 (1) of the Notice of Accidents Act, 1906,¹ and section 35 of the Act of 1887.

The provision at the end of subsection 1, providing for notice to be sent to the men's representative, is new. It is for the purpose of enabling the men or their representative carrying out an inspection under the provisions of section 16, p. 29.

Penalties.—For non-compliance with the provisions of this section the owner, agent, and manager are liable to the penalties provided by section 101, p. 171.

Statutory duty—The duty imposed by this section is a qualified one

Criminal liability—The owner, agent, and manager are protected by the provisions of section 102, (1), (2), and (3).

Civil liability—The owner is protected by section 102 (8), p. 174, which provides that in an action for damages the owner shall not be liable if it is shown that it was not reasonably practicable to avoid or prevent the breach (see section 75, p. 112)

81 *Power to extend provisions as to notice of accidents to dangerous occurrences*—(1) If the Secretary of State considers that, by reason of the risk of serious injury to persons employed, it is expedient that notice should be given under this Act in every case of any special class of explosion, fire, collapse of buildings, accidents to machinery or plant, or other occurrences at a mine, the Secretary of State may, by order, extend the provisions of this Act requiring notice of accidents to be given to an inspector to any such class of occurrences, whether personal injury or disablement is caused or not, and,

¹ 6 Edw VII, c. 53

where any such order is made, the provisions of this Act shall have effect as extended by the order.

(2) The Secretary of State may, by any such order, allow the required notice of any occurrence to which the order relates, instead of being sent forthwith, to be sent within the time limited by the order.

This section reproduces section 5, subsections 1 and 2, of the Notice of Accidents Act, 1906¹ In pursuance of subsection 2 of section 5, the Home Secretary, by order dated 22 December, 1906,² extended the provisions of the Notice of Accidents Act, requiring notice of accidents in mines and quarries to be given to an inspector to the following classes of occurrences, whether personal injury or disablement is caused or not :—

All cases of ignition of gas or dust below ground other than ignition of gas in a safety lamp.

All cases of fire below ground

All cases of breakages of ropes, chains, or other gear by which men are lowered or raised

All cases of overwinding cages while men are being lowered or raised.

All cases of inrushes of water from old workings.

By section 126, p 200, this Order is still in force.

REPORTS, INVESTIGATIONS, AND INQUESTS

82. *Special reports of inspectors*—Where at any mine an accident has caused loss of life or personal injury to any person, the Secretary of State may, at any time, direct an inspector to make a special report with respect to the accident, and the Secretary of State may cause any such report to be made public at such time and in such manner as he may think fit

This section re-enacts sections 44 and 46 of the Act of 1887.

83 *Formal investigation when directed by Secretary of State*—(1) Where it appears to the Secretary of State

¹ 6 Edw VII, c. 53.

² S. R. and O., No. 934, 1906.

that a formal investigation of any accident and of its causes and circumstances is expedient, the Secretary of State may direct such investigation to be held, and with respect to any such investigation the following provisions shall have effect :—

- (a) The Secretary of State may appoint a competent person to hold the investigation, and may appoint any person or persons possessing legal or special knowledge to act as assessor or assessors in holding the investigation
- (b) The person or persons so appointed (hereinafter called the court) shall hold the investigation in open court, in such manner and under such conditions as the court may think most effectual for ascertaining the causes and circumstances of the accident, and enabling the court to make the report in this section mentioned .
- (c) The court shall have for the purpose of the investigation all the powers of a court of summary jurisdiction when acting as a court in hearing informations for offences against this Act, and all the powers of an inspector under this Act, and in addition the following powers :—
 - (i) power by summons signed by the court, to require the attendance of all such persons as it thinks fit to call before it and examine for the said purpose ; and
 - (ii) power to require the production of all books, papers, and documents which the court considers important for the purposes of the inquiry .
- (d) Persons attending as witnesses before the court shall be allowed such expenses as would be

- allowed to witnesses attending before a court of record; and, in case of dispute as to the amount to be allowed, the same shall be referred by the court to a master of the Supreme Court, who on request, signed by the court, shall ascertain and certify the proper amount of the expenses.
- (e) The court shall make a report to the Secretary of State, stating the causes and circumstances of the accident, and adding any observations which the court thinks right to make, and the Secretary of State shall cause that report to be laid in full before both Houses of Parliament:
- (f) All expenses incurred in and about an investigation under this section (including the remuneration of any person appointed to act as assessor) shall be deemed to be part of the expenses of the Secretary of State in the execution of this Act

(2) If any person without reasonable excuse (proof whereof shall lie on him) fails to comply with any summons or requisition of the court, or impedes the court in the execution of its duty, he shall be guilty of an offence against this Act, and a person who is guilty of any such offence shall, in addition to any other fine to which he is liable under this Act, be liable to a fine not exceeding one pound for every day during which the offence continues.

This section re-enacts section 45 of the Act of 1887. The persons appointed under this section form a court of summary jurisdiction, but their powers are limited to the purposes of the investigation of the particular accident and its attendant causes and circumstances. For this purpose they possess all the powers conferred upon an inspector by section 98, p. 167.

Expenses of investigation.—By section 112, p. 183, these are subject to the sanction of the Treasury, paid by that department.

Penalties.—In addition to the penalty named in the section, the offender is liable to the penalties provided by section 101, p 171.

84. *Provisions as to coroners' inquests on deaths from accidents in mines* —(1) Where a coroner holds an inquest on the body of any person whose death may have been caused by any accident of which notice is required by this Act to be given to the inspector of the division, the coroner shall adjourn the inquest, unless an inspector, or some person on behalf of the Secretary of State, is present to watch the proceedings.

(2) The coroner, at least four days before holding the adjourned inquest, shall send to the inspector of the division notice in writing of the time and place of holding the adjourned inquest.

(3) The coroner, before the adjournment, may take evidence to identify the body, and may order the interment thereof.

(4) If an accident has not occasioned the death of more than one person, and the coroner has sent to the inspector of the division notice of the time and place of holding the inquest at such time as to reach the inspector not less than twenty-four hours before the time of holding the same, it shall not be imperative on him to adjourn the inquest in pursuance of this section, if the majority of the jury think it unnecessary so to adjourn.

(5) An inspector shall be at liberty at any such inquest to examine any witness, subject nevertheless to the power of the coroner to disallow any question which, in his opinion, is not relevant or is otherwise not a proper question

(6) Where evidence is given at an inquest at which an inspector is not present of any neglect as having caused or contributed to the accident, or of any defect in or about the mine appearing to the coroner or jury to

require a remedy, the coroner shall send to the inspector of the division notice in writing of such neglect or defect.

(7) Any person having a personal interest in or employed in or about or in the management of the mine in or about which the accident occurred shall not be qualified to serve on the jury empanelled on the inquest; and it shall be the duty of the constable or other officer not to summon any person disqualified under this provision, and it shall be the duty of the coroner not to allow any such person to be sworn or to sit on the jury.

(8) Any relative of any person whose death may have been caused by the accident with respect to which the inquest is being held, and the owner, agent, or manager of, or the fireman, deputy, or examiner of the district in, the mine in which the accident occurred, and any person appointed by the order in writing of the majority of the workmen employed at the said mine, and any person appointed in writing by any association of workmen to which the deceased at the time of his death belonged, or by any association of employers of which the owner is a member, or by any association to which any official or workman employed in the mine belongs, shall be at liberty to attend and examine any witness, either in person or by his counsel, solicitor, or agent, subject nevertheless to the power of the coroner to disallow any question which, in his opinion, is not relevant or is otherwise not a proper question.

(9) Every person who fails to comply with the provisions of this section shall be guilty of an offence against this Act.

This section re-enacts, with some additional provisions, section 48 of the Act of 1887.

Accident of which notice is required.—This expression is defined by section 80, p. 128.

Coroner's powers.—The unlimited power hitherto possessed by coroners to prevent representatives of the parties concerned in the accident from examining witnesses is now restricted by the provisions in subsection 8. Coroners now possess no greater powers in the control of proceedings before them than those exercised by any other judicial tribunals.

See for general law of coroners 50 and 51 Vict. c. 71. No qualification by estate is necessary to entitle persons to sit on a coroner's jury, but jurors should be qualified to write their names. The public apparently may be excluded from an inquest (*Jervis on Coroners*, p. 227; *Garnett v. Ferrand*, 6 B. and C. 611). Persons, including atheists, called as witnesses, may make an affirmation (24 and 25 Vict. c. 66; 32 and 33 Vict. c. 68, s. 4, and 33 and 34 Vict. c. 49). It is the duty of the coroner, if he be of opinion that a witness by answering a question is likely to incriminate himself, to tell the witness he is not bound to answer if by so doing he will incriminate himself, and to permit him to make any statement he thinks proper (*Wakley v. Cooke*, 4 Ex. 511). Jurors whilst considering their verdict out of court may be allowed, in the discretion of the coroner, refreshments at their own expense (33 and 34 Vict. c. 77). Coroners' jurors are not entitled by law to any fees, but in some places the authorities have allowed a fee.

Inspector of the division.—This expression is defined by subsection 3 of section 97, p. 166.

Person having a personal interest in the mine—This would appear to mean a person having some immediate pecuniary interest in the property in the mine.

Prosecution of coroner.—By subsection 6 of section 102, p. 174, no proceedings can be instituted against a coroner for any offence under the Act without the consent of the Secretary of State.

RESCUE AND AMBULANCES

85. *Rescue work and ambulances*—General regulations made under this Act may require provision to be made at all mines or any class of mine in regard to all or any of the following matters:—

(a) Supply and maintenance of appliances for use in

rescue work and formation and training of rescue brigades :

- (b) Supply and maintenance of ambulance appliances and the training of men in ambulance work.

This section is in substitution for section 49, rule 34, and section 1 of the Mines Accidents (Rescue and Aid) Act, 1910.¹

General regulations.—In pursuance of the powers conferred by section 85, *post*, pp 250–5, the Secretary of State has issued general regulations which apply to all mines (unless exempted by reason of the number employed below ground being less than one hundred, and the organization of a central rescue station is, in the opinion of the Home Secretary, impracticable). The provisions relating to the supply and maintenance of appliances for rescue work and formation and training of rescue brigades are contained in rules 138 to 146 inclusive, and those relating to the supply and maintenance of ambulance appliances and the training of men in ambulance work in rules 147 to 149 inclusive of Part IV of the General Regulations dated 10 July, 1913,² p 250.

By General Regulations dated 13 May, 1914,³ RR 140, 141, and 142 of the General Regulations of 10 July, 1913, shall not apply to any mine which is served by a central rescue station maintaining a permanent rescue corps, and which is situated within a radius of 10 miles from the station and is in telephonic communication with it, subject to the conditions stated in the Order. See p. 271

PART V

REGULATIONS

GENERAL AND SPECIAL REGULATIONS

86 *General regulations*—(1) The Secretary of State may by order make such general regulations for the conduct and guidance of the persons acting in the management of mines or employed in or about mines as may

¹ 10th Edw. VII, and 1 Geo. V, c. 15.

² Statutory Rules and Orders, 1913, No. 748.

³ Statutory Rules and Orders, 1914, No. 678.

appear best calculated to prevent dangerous accidents and to provide for the safety, health, convenience, and proper discipline of the persons employed in or about mines, and for the care and treatment of horses and other animals used therein, and any such regulations may vary or amend any of the provisions contained in Part II of, or the Third Schedule to, this Act

(2) The regulations made under such order may apply either to all mines or to any specified class or description of mines, and may provide for the exemption of any specified class or description of mines either absolutely or subject to conditions

(3) The provisions contained in Part I of the Second Schedule to this Act shall have effect with respect to the procedure for making orders under this section

(4) An order made under this section shall be laid as soon as possible before both Houses of Parliament, and shall have effect as if enacted in this Act.

(5) An order made under this section may be revoked, altered, or added to by an order made in like manner and subject to the same provisions as the original order.

Protection of animals—Provisions for the care and protection of horses and animals are contained in the Third Schedule to the Act, *post*, pp 211-14. General regulations for testing for glanders in horses before being taken below ground have been issued by the Secretary (see *post*, p 214). Penalties for contravention of or non-compliance with any of these provisions or regulations are provided by section 109, p 181.

Procedure—The provisions for making general regulations are contained in Part I of the Second Schedule of the Act, p. 208.

General regulations—Penalties for the breach of general regulations other than those relating to animals are provided by section 90, p 142

87 *Special regulations*—(1) Where the inspector of the division, or the owner of, or a majority ascertained

by ballot of the workmen employed in, any mine is of opinion that the general regulations for the time being in force with respect to the mine ought in their application to that mine to be supplemented or modified, the inspector or the owner or such majority of workmen may transmit for the approval of the Secretary of State special regulations for the mine.

(2) The provisions set out in Part II of the Second Schedule to this Act shall have effect with respect to the procedure for obtaining the approval of the Secretary of State.

(3) When special regulations have been approved by the Secretary of State, they shall, as respects that mine, have effect until revoked as if they formed part of the general regulations applicable to the mine.

(4) Where any special regulations are in force with respect to any mine they may be revoked, altered, or added to at the instance of the inspector of the division, or of the owner of, or a majority of workmen employed in, the mine in like manner and subject to the same provisions as the original special regulations

This part of the Act supplants sections 51 to 58 inclusive of the Act of 1887.

Special regulations—Under this section the special regulations, when approved by the Secretary of State, possess the same force as the general regulations of the mine, and are within the ambit of the Act. They are equivalent to the old special rules under sections 51 and 52 of the Act of 1887. By section 89, *post*, pp. 141–2, general regulations and special regulations for the time being in force in the mine are “the regulations of the mine.”

Procedure.—The provisions for transmitting special regulations to the Secretary of State for approval are contained in Part II of the Second Schedule of the Act, p. 210.

Penalties.—Penalties for the breach of special regulations are provided by section 90, p. 142.

PUBLICATION OF ABSTRACT OF ACT AND REGULATIONS

88. *Publication of abstract of Act and copy of special rules.*—(1) For the purpose of making known the provisions of this Act and the regulations of the mine to all persons employed in and about a mine, the prescribed abstract of this Act and a correct copy of all the regulations of the mine shall be published as follows :—

- (a) The owner, agent, or manager of the mine shall cause a copy of the abstract and a copy of the regulations, with the name of the mine and the name and address of the inspector of the division, and the name of the owner or agent and of the manager, appended thereto, to be posted up in some conspicuous place at or near the mine, where they may be conveniently read or seen by the persons employed ; and so often as the same become defaced, obliterated, or destroyed, shall cause them to be renewed with all reasonable despatch :
- (b) The owner, agent, or manager shall supply gratis to each person employed in or about the mine at the commencement of his employment, and on each occasion when a new abstract is issued or new regulations made, a book containing so much of the abstract and so much of the regulations as the Secretary of State may prescribe as being the parts of the abstract and regulations for the time being in force affecting persons of the class to which the person belongs, and shall also supply, at a price not exceeding one penny, to any such person who applies therefor at the office at which the persons immediately employed by the owner, agent, or manager are paid, a copy of such book .

- (c) Every copy of the regulations shall be kept distinct from any regulations which depend only on the contract between the employer and employed.

(2) In the event of any non-compliance with the provisions of this section by any person whomsoever, the owner, agent, and manager shall each be guilty of an offence against this Act unless he proves that he had taken all reasonable means, by enforcing to the best of his power the observance of this section, to prevent such non-compliance.

This section re-enacts section 57 of the Act of 1887.

Regulations of the mine.—By section 89 the general and special regulations for the time being in force at the mine are “the regulations of the mine”

Workman's right to a copy.—When a workman is engaged subject to special rules, and when he is entitled to receive a copy, the delivery of a copy of such special rules is a condition precedent to the employer's right to enforce them, but the workman may nevertheless be convicted of an offence. (*Higginson v. Hapley*, 9 L T. 690 [1869])

Statutory duty—For non-compliance with the provisions of this section, the owner, agent, and manager is each liable, no matter who has committed the offence, unless he proves that he had taken all reasonable means, by enforcing to the best of his power the observance of this section, to prevent such non-compliance.

To this extent their criminal liability is qualified. As to what are “reasonable means,” see section 90, p. 142, and section 75 n., pp. 112-7.

By section 102 (1) and (3), *post*, p. 172, their criminal liability is further limited.

The civil liability of the *owner* is limited by section 102 (8), p. 174, which provides that he is not liable in damages as for a breach of statutory duty if it is shown that it was not reasonably practicable to avoid or prevent the breach. As to what is “reasonably practicable,” see section 75, pp. 112-7.

89 *Regulations applicable to mines.*—(1) The general regulations applicable to a mine, as supplemented or

modified by the special regulations, if any, for the time being in force with respect to the mine shall be the regulations of the mine.

(2) An inspector shall, when required, certify a copy which is shown to his satisfaction to be a true copy of any regulations which for the time being are in force in any mine, and a copy so certified shall be evidence (but not to the exclusion of other proof) that those regulations are the regulations of the mine and of the fact that they are duly made under this Act.

Subsection 2 re-enacts section 56 of the Act of 1887. The general and special regulations taken together are now by subsection 1 known as "the regulations of the mine."

90. *Penalty for breach of regulations*—If any person who is bound to observe the regulations of any mine, acts in contravention of or fails to comply with any of them, he shall be guilty of an offence against this Act, and also the owner, agent, and manager of such mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the regulations, to prevent such contravention or non-compliance.

This section re-enacts section 51 of the Act of 1887.

Breach of regulations.—Every person—and this includes a stranger who descends the pit—who fails to observe the regulations, i.e. the general and special regulations in force for the time being, is guilty of an offence and is liable to the penalty provided by section 101, p. 171.

By a special rule no workman was to ascend the pit contrary to the direction of the hooker-on. The workmen had power to leave at a moment's notice, and being dissatisfied with their working place, discharged themselves. The hooker-on refused to allow them to ascend the pit until the proper time, but they ascended contrary to his direction. Held that they had been guilty of a breach of the special rule.

(*Higham v. Wright*, 2 C.P.D. 397.) A similar case is that of *Colbeck v. Whitham*, 76 J.P. 291 [1912], where several trammers, after being at work some hours, refused to go on, and went to the pit-bottom demanding to be drawn up. They gave as a reason that it was impossible for them to continue work owing to a deficiency of tubs. There was, in fact, no deficiency in tubs, although some slight delay in providing them. The under-manager ordered the men back to work, but they still refused, in consequence of which other workmen also were obliged to stop work. The trammers were convicted of a breach of a special rule under section 51. It was suggested in argument that when the men chose to think there were not enough tubs and to leave the mine, they were doing what was termed "striking."

"I cannot," said Alverstone, L.C.J., "take that view. It seems to me that they put their judgment against that of the under-manager, when there were, in fact, tubs which they could have used. It is of extreme importance that in coal mines there should be a responsible authority to look after safety in working."

In *George v. Glasgow Coal Co., Ltd* [1909], A C 123, where a miner had deliberately disobeyed a special rule, it was held to constitute sufficient evidence of "serious and wilful misconduct" within the meaning of the Workmen's Compensation Act, 1906.

Statutory duty.—For any contravention of or non-compliance with the regulations of the mine, committed by anyone bound to observe the regulations, the owner, agent, and manager is each liable unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the regulations to prevent such contravention or non-compliance. To this extent his criminal liability is qualified.

Reasonable means—"Unless he proves that he had taken all reasonable means," etc. As to the meaning of these words see the cases already referred to, of *Baker v. Carter*, 3 Ex D. 132, and *Hall v. Hopwood*, 49 L J M C. 17. In the former case the part-owner of a mine, whose co-partner was a certificated manager, was summoned for neglecting to observe a general rule, it was proved that he was non-resident at the mine, had taken no active part in the management, having

left entire control to the certificated manager: the Court held that in appointing a duly certificated manager to reside at the mine and to take all the management constituted all the "reasonable means" that were required on his part. In the latter case it was held that it was the duty of the manager to take all means that lay in his power to carry out the special rules, even though such means might not be absolutely effective, in order to secure safety. See also *Soutar v. Clarke*, 7 F. Ct. Just. 1.

By section 102 (1) and (3), *post*, p. 172, the criminal liability of the owner, agent, or manager is further limited, but the mere appointment of a manager will not of itself be a defence. See also section 75 n., pp. 112-7.

The civil liability of the *owner* is limited by section 102 (8), p. 174, which provides that he is not liable in damages if it is shown that it was not reasonably practicable to avoid or prevent the breach. As to what is "reasonably practicable," see section 75 n., pp. 112-7.

PART VI

EMPLOYMENT

EMPLOYMENT OF BOYS, GIRLS, AND WOMEN

91. *Prohibition against employment of boys, girls, and women below ground*—No boy under the age of fourteen years, and no girl or woman of any age, shall be employed in or allowed to be for the purpose of employment in any mine below ground. Nothing in this section shall apply to any boy who has been lawfully employed in any mine below ground before the passing of this Act.

This section is in substitution for section 4 of the Act of 1887 and section 1 of the Act of 1900. By section 122, *post*, p. 196, "boy" means a male under the age of sixteen; "girl" a female under sixteen; and "woman" a female of the age of sixteen or upwards. The age at which boys may be allowed to work below ground is raised to fourteen years.

Misrepresentation as to age.—Where a boy or girl is engaged and employed under the belief in good faith of the representation of the parent or guardian, the owner, agent, and manager is exempt from the penalty provided by section 102 (7), p. 174.

92 *Employment of boys, girls, and women above ground.*
—With respect to boys, girls, and women employed above ground, in connection with any mine, the following provisions shall have effect :—

- (1) No boy or girl under the age of thirteen years shall be so employed, unless lawfully so employed before the passing of this Act :
- (2) No boy or girl of or above the age of thirteen years and no woman shall be so employed for more than fifty-four hours in any one week or more than ten hours in any one day
- (3) No boy, girl, or woman shall be so employed between the hours of nine at night and five on the following morning, nor on Sunday, nor after two o'clock on Saturday afternoon .
- (4) There shall be allowed an interval of not less than twelve hours between the termination of employment on one day, and the commencement of the next employment
- (5) A week shall be deemed to begin at midnight on Saturday night and to end at midnight on the succeeding Saturday night :
- (6) No boy, girl, or woman shall be employed continuously for more than five hours, without an interval of at least half an hour for a meal, nor for more than eight hours on any one day, without an interval or intervals for meals amounting altogether to not less than one hour and a half .

- (7) No boy, girl, or woman shall be employed in moving railway wagons, or in lifting, carrying, or moving any thing so heavy as to be likely to cause injury to the boy, girl, or woman.

This section is in substitution for section 7 of the Act of 1887 and section 1 of the Act of 1907. The age at which boys and girls may be employed at the surface is raised to thirteen years.

Pit-banks.—This expression is defined in Part II (27) of the Sixth Schedule to the Factory and Workshop Act, 1901,¹ as “any place above ground adjacent to a shaft of a mine in which place the employment of women is not regulated by the Coal Mines Regulation Act, 1887 . . . whether such place does or does not form part of the mine within the meaning of that Act”

Since the employment of women above ground is under restrictions by the Coal Mines Act, so far as this section does not apply to the employment of women, young persons, and children on pit-banks of coal mines, such employment is regulated by the Factory and Workshop Act, 1901. If women only be employed in such circumstances as to exclude them from the operation of the Coal Mines Regulation Acts, and their labour is not in connection with a steam engine or other mechanical power, they will then only be subject to the provisions of section 29 of the Factory and Workshop Act, 1901. If young persons or children are also employed, then the mine is subject to the whole of the provisions of that Act

The special provisions as to employment in women's workshops under section 29 of the Act are as follows—

“(1) In a workshop which is conducted on the system of not employing either children or young persons, and the occupier of which has served on an inspector notice of his intention to conduct his workshop on that system—

- (a) The period of employment for a woman shall, except on Saturday, be a specified period of twelve hours, taken between six o'clock in the morning and ten o'clock in the evening, and shall on Saturday be a specified period of eight hours, taken between six

¹ 1 Edw. VII, c. 22

- o'clock in the morning and four o'clock in the afternoon, and
- (b) There shall be allowed to a woman for meals and absence from work during the period of employment a specified period not less, except on Saturday, than an hour and a half, and on Saturday than half an hour.

“(2) When the occupier of a workshop has served on an inspector notice of his intention to conduct that workshop on the system of not employing children or young persons therein, the workshop shall be deemed to be conducted on that system until the occupier changes it, and no change shall be made until the occupier has served on the inspector notice of his intention to change the system, and until the change a child or young person employed in the workshop shall be deemed to be employed contrary to the provisions of this Act. A change in the system shall not be made oftener than once a quarter, unless for special causes allowed in writing by an inspector.”

By section 137 of the Act, if a woman is not allowed times for meals or absence as required by the Act, or is employed during any part of such times in the factory or workshop, or allowed to remain in any room, she is deemed to be employed contrary to the provisions of the Act, and the employer is liable to a fine not exceeding £3, and if the offence was committed during the night, to a fine not exceeding £5.

In *Rogers v Barlow and Son*, 70 J.P. 214, 94 L T 519 [1906], a child was employed in a factory where the meal time was from 5.30 to 6 p.m. Work having stopped for the day at 5.30, the child proceeded to clean the spindles in the presence of the under-manager and several overlookers. Notices were exhibited calling attention to the provisions of the Act against working in meal times, and the justices found that the defendants had used every possible means to carry out the Act. It was held by the Divisional that it could not be said that the employer had used due diligence in enforcing the provisions of the Act.

Misrepresentation as to age.—Where a boy or girl is engaged or employed under the *bona fide* belief in the representation of the parent or guardian, the owner, agent, and manager is exempt from the penalty provided by section 102 (7), *post*,

p 174, and the parent or guardian or other person making the representation is guilty of the offence

. 93. *Notice fixing hours of employment.*—(1) The manager of every mine shall fix within the limits allowed by the foregoing section, and shall specify in a notice in the prescribed form, which must be affixed at the mine—

(a) the period of employment ; and

(b) the times allowed for meals ;

and no boy, girl, or woman shall be employed in connection with any mine except during the period so fixed, but a different period and different times may be fixed for different persons and for different days.

(2) A change in the said period or times shall not be made oftener than once a quarter unless for special cause allowed in writing by an inspector .

Provided that provision may be made by general regulations for allowing a different time to be substituted in case of any special emergency for the time for any meal fixed under this section.

Employment in meal time—See *Rogers v Barlow and Son*, *sup* , p 147.

General regulations.—These may be made in pursuance of section 86, p. 137.

94. *Register of boys, girls, and women employed*—

(1) The owner, agent, or manager of every mine shall keep in the office at the mine a register, and shall cause to be entered in that register, in such form as the Secretary of State may from time to time prescribe, the name, age, residence, and date of first employment of all boys employed in the mine below ground, and of all boys, girls, and women employed above ground in connection with the mine ; and shall, on request, produce the register to any inspector, and to any officer of the local

education authority for the area in which the mine is situate, at all reasonable times, and shall allow any such inspector or officer to inspect and copy the same.

(2) The immediate employer of every boy, other than the owner, agent, or manager of the mine, before he causes the boy to be below ground in any mine, shall report to the manager of the mine, or to some person appointed by that manager, that he is about to employ the boy in the mine.

This section is in substitution for section 8 of the Act of 1887

Person employed by contractor.—In *Marrow v. Flimby and Broughton Moor Coal, etc, Co* [1898], 2 Q B 589, a pit-sinker was engaged to sink a shaft at the defendants' colliery. He engaged and paid his own sinkers, one of whom was killed. It was held that the control given by the Act and by the special rules of the mine to the manager over all persons in the mine did not make the pit-sinker and the sinkers employed by him "workmen" in the employment of the colliery owners within the meaning of section 10 of the Employers and Workmen Act, 1875¹

95 *Penalty for employment of persons in contravention of Act*—If any person contravenes or fails to comply with, or permits any person to contravene or fail to comply with, any provision of this Act with respect to the employment of boys, girls, or women, or to the register of boys, girls, and women, or to reporting the intended employment of boys, he shall be guilty of an offence against this Act; and, in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means, by publishing and to the best of his power enforcing the provisions of this Act, to prevent the contravention or non-compliance.

¹ 38 & 39 Vict. c. 90.

This section re-enacts section 9 of the Act of 1887.

Penalty.—For any breach of any of the provisions in the preceding sections of Part VI relating to the employment of boys, girls, or women, every person is liable to the penalty provided by section 101, p. 171.

Statutory duty.—In the event of such contravention or non-compliance by any other person whatever, the owner, agent, and manager is each liable unless he can prove that he had taken all reasonable means of publishing and to the best of his power enforcing the provisions of the Act to prevent such contravention or non-compliance.

Reasonable means.—See *Baker v. Carter*, 3 Ex. D. 132; *Hall v. Hopwood*, 49 L.J.M.C. 19; *Soutar v. Clarke*, 7 F. 1, p. 143.

Publication of rules.—See *Rogers v. Barlow and Son*, 94 L.T. 519 [1906], p. 147.

By section 102 (1) and (3), p. 172, the criminal liability of the owner, agent, and manager is further limited. See also section 75 n, *ante*, pp. 112–7.

Misrepresentation of age.—Where he has acted in good faith on the representation of parent or guardian, the owner, agent, and manager is exempt by section 102 (7), p. 174, from any penalty. See also sections 91 and 92, pp. 144–5.

The civil liability of the *owner* is limited by section 102 (8), p. 174, which provides that he is not liable in damages if it is shown that it was not reasonably practicable to avoid or prevent the breach. As to what is “reasonably practicable,” see section 75 n., p. 115.

WAGES

96. *Prohibition of payment of wages in licensed premises, and provision as to weekly payment of wages.*—(1) No wages shall be paid to any person employed in or about any mine at or within any licensed premises as defined by the Licensing (Consolidation) Act, 1910,¹ or other house of entertainment, or any office, garden, or place belonging or contiguous thereto, or occupied therewith.

¹ 10 Edw. VII and 1 Geo. V, c. 24.

(2) The wages of all persons employed in or about any mine shall be paid weekly, if a majority of such persons so desire, and there shall be delivered to each such person a statement containing detailed particulars of how the amount paid to him is arrived at

(3) Every person who contravenes or fails to comply with or permits any person to contravene or fail to comply with this section shall be guilty of an offence against this Act; and in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means by publishing and to the best of his power enforcing the provisions of this section to prevent the contravention or non-compliance.

This section re-enacts section 11 of the Act of 1887.

Licensed premises—By the Licensing (Consolidation) Act, 1910,¹ this expression means “premises in respect of which a justices’ licence has been granted and is in force.” A justices’ licence means “a justices’ licence for the sale of intoxicating liquor for consumption on the premises, granted in accordance with this Act.” The latter is known as an “on-licence.”

Penalty—See section 95 n, *ante*, p 150.

THE TRUCK ACTS

*(All coal mines are now within the Truck Acts
1831 to 1896)*

By the Truck Act, 1831,² wages must be paid in current coin of the realm, or, with workman’s consent, by bank-notes or drafts or orders payable in cash within fifteen miles of office, and any contracts making the wages payable, and all

¹ 10 Edw. VII and 1 Geo. V, c. 24.

² 1 & 2 Will. IV. c. 37.

payments in any other mode, shall be void and any workman may recover from his employer so much of the wages as have not been so paid, and the employer may be fined for first offence not more than £10 and not less than £5, for the second not more than £20 and not less than £10, and for the third shall be guilty of a misdemeanour punishable by fine not exceeding £100.

An employer may, however, by agreement in writing with his workman, make deductions from wages in respect of medicine, medical attendance, fuel, materials, tools, or implements to be used by workman in his trade or occupation (such materials, tools, or implements must be sold to the workman, not let out on hire), for provender consumed by any beast of burthen employed by a workman in his occupation, for rent of house or tenement, and for food prepared under the employer's roof and consumed there, but the employer must not make any profit therefrom (*Pillar v. Llynvi Coal Co.*, 4 C P. 752)

By the Truck Amendment Act, 1887,¹ in any claim for wages, the employer is not entitled to set off or counterclaim for goods supplied, and all agreements with workman to spend his wages at any particular shop are illegal, but deductions may be made for school fees paid by the employer for his children. No deduction may be made for sharpening or repairing tools except by agreement not forming part of the condition of hiring.

By the Truck Act, 1896,² no deductions from wages and no payments to the employer by the workman may be made in respect of any fine unless the terms are contained in a notice posted in a conspicuous place or in a written contract signed by him, specifying the acts or omissions in respect of which the fine is imposed and the amount of the fine. The act or omission must be something causing or likely to cause damage or loss to the employer or interruption or hindrance to his business. The fine must be fair and reasonable. Particulars in writing of any such deductions or payments must be supplied to the workman.

Similar restrictions are imposed in the case of deductions for bad or negligent work or injury to materials or property

¹ 50 & 51 Vict. c. 46.

² 59 & 60 Vict. c. 44.

also in the case of deductions for the use or supply of materials, tools or machines, standing room, light, heat, or for anything done or provided in relation to the work or labour. All contracts or true copies thereof must be produced on demand to inspectors of factories or mines each workman is entitled free of charge to a copy of his contract or of the notice containing its terms; and every employer must keep a register (open at all times to the inspectors) of deductions or payments in respect of fines, and on default is liable on summary conviction to a fine not exceeding forty shillings

Where deductions are made from weights and not from wages, such deductions are so made in order to compute the wages, and are not contrary to the Truck Acts

Sections 12, 13, 14, and 15 of the Act of 1887 are not repealed by this Act and are still in force. So too are the Weights and Measures Act, 1878, the Coal Mines (Checkweigher) Act, 1894, and the Coal Mines (Weighing of Minerals) Act, 1905.

Penalty.—By section 126 (e) of the principal Act, 1911, offences under such of the provisions of the Coal Mines Regulation Acts, 1887 to 1908, as are unrepealed by this Act are offences in like manner as if they were offences against the Act of 1911, and consequently persons guilty of such offences are liable to the penalties provided by section 101, *post*, p. 171, subject to the limitations of section 102, *post*, p. 172.

SECTION 12 OF THE ACT OF 1887

12. *Payment of persons employed in mines by weight—*

(1) Where the amount of wages paid to any of the persons employed in a mine depends on the amount of mineral gotten by them, those persons shall be paid according to the actual weight gotten by them of the mineral contracted to be gotten, and the mineral gotten by them shall be truly weighed at a place as near to the pitmouth as is reasonably practicable.

Provided that nothing in this section shall preclude the owner, agent, or manager of the mine from agreeing with the persons employed in the mine that deductions shall be made in respect of stones or substances other than the

mineral contracted to be gotten, which shall be sent out of the mine with the mineral contracted to be gotten, or in respect of any tubs, baskets, or hutches being improperly filled in those cases where they are filled by the getter of the mineral or his drawer, or by the person immediately employed by him; such deductions being determined in such special mode as may be agreed upon between the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other, or by some person appointed in that behalf by the owner, agent, or manager, or (if any checkweigher is stationed for this purpose as hereinafter mentioned) by such person and such checkweigher, or in case of difference by a third person to be mutually agreed on by the owner, agent, or manager of the mine on the one hand, and the persons employed in the mine on the other, or in default of agreement appointed by a chairman of a court of quarter sessions within the jurisdiction of which any shaft of the mine is situate

Mineral contracted to be gotten—Where the contract was for coals at 1s 6d per ton and heading slack at 7d, no other slack to be paid for, and when it was subsequently screened and amount checked by persons employed only by owner, held—miners entitled to recover wages as if no such slack had been deducted (*Netherseal Colliery Co v Bourne*, 14 App. Cas. 228). When deductions had been made in respect of small coal, upon the ground that the “mineral contracted to be gotten” was large coal, it was held that the contract was illegal and that the miners were entitled to be paid according to the actual weight of all the coal gotten by them. Held also that the sums allowed for the small coal were to be at the same rate as that paid for the large coal. (*Brace v. Abercarn Colliery Co*, *Huggins v. London and South Wales Colliery Co*. [1891], 2 Q.B. 699.)

Where deductions are agreed upon, the deductions are deductions from weight and not from wages. That from which deduction is to be made is the whole amount of material which is sent up in tubs from the mine. That which is to be

deducted is the foreign substance which is sent up in the tubs or the slack of coal dust with which the tubs have been improperly filled (*Kearney v. Whitehaven Colliery Co.* [1893], 1 Q B 700.) Where the agreement was for deduction of a fixed amount for dirt, viz. 56 lb. per truck, this was held good as a "special mode" of determining deductions for stones and dirt. (*Mowatt v. Ronaldson*, 31 L.R. Sc. 896)

See also *Ronaldson v. Mowatt*, 21 Sess. Cas (ser. 4), Just. Cas. 55; *Atkinson v. Hashe*, 21 R., Just Cas 62.

Checkweigher.—In the interests of the workmen this and the following section constitute considerable improvement upon the eighteenth section of the Act of 1872. That section was open to grave objections—it required the checkweigher to be selected from persons in the employment of the mine-owner, and so enabled the owner to get rid of an obnoxious checkweigher by the discharge of all the workmen; it gave the owners facilities for obtaining his dismissal by the Court of Summary Jurisdiction on the grounds other than those of improper exercise of his office. The present Act places no such limitation upon the class from whom checkweighers may be appointed. It limits to some, though not, we think, to an adequate extent, the power of the owner to obtain his discharge by justices, and finally it secures the payment of his wages and affords facilities for their collection.

(2) If any person contravenes or fails to comply with, or permits any person to contravene or fail to comply with, this section, he shall be guilty of an offence against this Act; and in the event of any such contravention or non-compliance by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means by publishing and to the best of his power enforcing the provisions of this section to prevent the contravention or non-compliance.

Penalty.—See p. 153 and section 95 n., p. 150.

(3) Where it is proved to the satisfaction of a Secretary of State, in the case of any mine or class of mines employing not more than thirty persons underground, to

be expedient that the persons employed therein should, upon the joint representation of the owner or owners of any such mine or class of mines and the said persons, be paid by any method other than that provided by this Act, such Secretary of State may, if he think fit, by order allow the same either without conditions or during the time and on the conditions specified in the order

Exemptions—Where exemptions were granted by order of the Secretary of State and are not revoked or altered by him, they are specially preserved and kept in force by section 126 (a), *post*, p. 200, although they would not have been granted under the present Act. (*Dickinson v. Handsley*, 60 L.T. 567 [1889])

Method other than—By section 13 (7), *post*, p. 159, where miners are paid by measure or gauge, the provisions of the Act apply as if the term "weighing" included "measuring and gauging."

SECTION 13 OF THE ACT OF 1887

13. *Appointment on part of men and removal of checkweigher.*—(1) The persons who are employed in a mine, and are paid according to the weight of the mineral gotten by them, may, at their own cost, station a person (in this Act referred to as a "checkweigher") at each place appointed for the weighing of the mineral and at each place appointed for determining the deductions in order that he may, on behalf of the persons by whom he is so stationed, take a correct account of the weight of the mineral or determine correctly the deductions, as the case may be

Two seams in mine.—In *Thorpe v. Davies* [1908], 2 K.B. 750, in a mine not divided under section 19, there were two seams which were worked by separate gangs paid according to the weight of the mineral gotten. It was held that the two seams constituted a "mine" within the meaning of the Act, and consequently that the miners in one seam could not exclude the miners in the other seam from taking part in the election of a checkweigher appointed to weigh for the former.

It will be observed that the section expressly affords facilities for the checkweigher to watch the interests of the workman, not merely in the weighing, but also in the calculations of the deductions.

(2) A checkweigher shall have every facility afforded to him for enabling him to fulfil the duties for which he is stationed, including facilities for examining and testing the weighing-machine, and checking the taring of tubs and trams where necessary and if at any time proper facilities are not afforded to a checkweigher as required by this section, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act, unless he proves that he had taken all reasonable means to enforce to the best of his power the requirements of this section.

The checkweigher's right to examine the weighing-machine, which under the old Act was open to question, is here secured.

Penalty.—See p 153 and section 95 n., p 150.

Interference with checkweigher.—See p. 161.

(3) A checkweigher shall not be authorized in any way to impede or interrupt the working of the mine, or to interfere with the weighing, or with any of the workmen, or with the management of the mine. but shall be authorized only to take such account or determine such deductions as aforesaid, and the absence of a checkweigher from the place at which he is stationed shall not be a reason for interrupting or delaying the weighing, or the determination of deductions at such place respectively, but the same shall be done or made by the person appointed in that behalf by the owner, agent, or manager, unless the absent checkweigher had reasonable ground to suppose that the weighing or determination of the deductions, as the case may be, would not be proceeded with : Provided always, that nothing in this section shall prevent a checkweigher giving to any workman an account of the

mineral gotten by him, or information with respect to the weighing, or the weighing-machine, or the taring of the tubs or trams, or with respect to the deductions or any other matter within the scope of his duties as checkweigher, so always, nevertheless, that the working of the mine be not interrupted or impeded.

(4) If the owner, agent, or manager of the mine desires the removal of a checkweigher on the ground that the checkweigher has impeded or interrupted the working of the mine, or interfered with the weighing or with any of the workmen, or with the management of the mine, or has at the mine to the detriment of the owner, agent, or manager done anything beyond taking such account, determining such deductions, or giving such information as aforesaid, he may complain to a court of summary jurisdiction, who, if of opinion that the owner, agent, or manager shows sufficient *prima facie* ground for the removal of the checkweigher, shall call on the checkweigher to show cause against his removal.

When, for instance, a checkweigher attempts to induce workmen to cease work, but work is not interrupted, he may be removed (*Prentice v. Hall*, 37 LT [N S] 605; 26 W.R. 237). If the men are dismissed and the mine closed, the checkweigher ceases to hold office, and is not reinstated, even if the same men are immediately re-engaged.

See also *Whitehead v. Holdsworth*, 4 Ex. D 13, 48 L.J. Ex. 254; *Merryton Coal Co. v. Anderson*, 18 R 203.

In *Sykes v. Barraclough* [1904], 2 K.B. 675, a checkweigher who was also president of the local miners' association presided over meetings of the miners of the colliery held in the town and at the pit-gate, and advised them not to work on play days. This was held to be an interference with the workmen within the section, and that such interference was not limited to acts done by a checkweigher by virtue of or in connection with his office or to acts done at the mine.

(5) On the hearing of the case the Court shall hear the parties, and, if they think that at the hearing sufficient

ground is shown by the owner, agent, or manager to justify the removal of the checkweigher, shall make a summary order for his removal, and the checkweigher shall thereupon be removed, but without prejudice to the stationing of another checkweigher in his place.

Order of justices —In an order for the removal of a checkweigher the words were added "And from henceforth he shall cease to perform the duties of checkweigher on behalf of the persons employed in the said mine aforesaid" It was held in *R. v. Llewellyn*, 96 L.T. 32 [1907], that "henceforth" meant from the date of the order and not "henceforth and for ever."

(6) The Court may in every case make such order as to cost of the proceedings as the Court may think just.

(7) If in pursuance of any order of exemption made by a Secretary of State the persons employed in a mine are paid by the measure or gauge of the material gotten by them, the provisions of this Act shall apply in like manner, as if the term "weighing" included measuring and gauging, and the terms relating to weighing shall be construed accordingly.

Exemptions —See section 12 (3), *ante*, p. 155.

(8) If the person appointed by the owner, agent, or manager to weigh the mineral impedes or interrupts the checkweigher in proper discharge of his duties, or improperly interferes with or alters the weighing-machine or the tare in order to prevent a correct account being taken of the weighing and taring, he shall be guilty of an offence against this Act.

This subsection, it will be observed, protects the workmen against dishonesty or vexatious interferences with their checkweigher on the part of the owner's weigher.

Penalty.—See p. 153, section 95 n., *ante*, p. 150.

SECTION 14 OF THE ACT OF 1887

14 *Remuneration of checkweigher.*—(1) Where a checkweigher has been appointed by the majority, ascertained by ballot, of the persons employed in a mine who are paid according to the weight of the mineral gotten by them, and has acted as such, he may recover from any person for the time being employed at such mine and so paid, his proportion of the checkweigher's wages or recompense, notwithstanding that any of the persons by whom the checkweigher was appointed may have left the mine, or others have entered the same since the checkweigher's appointment, any rule of law or equity to the contrary notwithstanding

Liability of miner to pay checkweigher —In *Oxton v. Williams*, 26 T L R. 242, 101 L T 957 [1910] it was held that where a miner was not paid according to the weight of mineral gotten by him he was not liable under this section to pay the checkweigher for weighing the coal, although such weighing was indirectly of some benefit to him. The plaintiff had been appointed checkweigher whilst the defendant was being paid by the weight. Subsequently the defendant was employed in opening a new seam and was paid a daily wage of 6s. 7d., subject to certain deductions. He paid the 9d. a week at first and subsequently refused to continue such payment. The coal sent up by him was weighed and checked, and the defendant admitted that such checkweighing was of benefit to him, since directly he sent up more coal than the 6s. 7d. represented he could return to payment by weight gotten. It was also held that if the defendant had failed to give notice to the checkweigher of the change in his mode of payment, the checkweigher, if he had continued to weigh the coal, might have claimed his wages upon a *quantum meruit*.

(2) It shall be lawful for the owner or manager of any mine, where the majority of the before-mentioned persons ascertained as aforesaid, so agree, to retain the agreed contribution of the persons so employed and paid as aforesaid for the checkweigher, notwithstanding the provisions

of the Acts relating to Truck, and to pay and account for the same to the checkweigher.

It will be observed that in the appointment of a checkweigher it is necessary that the workmen should have a ballot of all the "workmen employed in a mine" who "are paid according to the weight of the minerals gotten by them." Other workmen have no right to take part in such ballot nor any obligation to pay any portion of the wages: it must also be noticed that any workman who is so employed and so paid who may be employed to work at the mine subsequent to the stationing of the checkweigher becomes liable for a rateable proportion of the checkweigher's wage. Such liability would not, of course, exist were it not for the statute.

Penalty—See p. 153 and section 95, *ante*, p. 150.

Section 13 is subject to the provisions of the *Coal Mines (Checkweigher) Act, 1894*.¹

Penalty for interference with office of checkweigher.—If the owner, agent, or manager of any mine or any person employed by or acting under the instructions of any such owner, etc., interferes with the appointment of a checkweigher or refuses to afford proper facilities for the holding of any meeting for the purpose of making such appointment, in any case in which the persons entitled to make the appointment do not possess or are unable to obtain a suitable meeting-place, or attempts whether by threats, bribes, promises, notice of dismissal, or otherwise howsoever, to exercise improper influence in respect of such appointment, or to induce the persons entitled to appoint a checkweigher, or any of them, not to reappoint a checkweigher or to vote for or against any particular person or class of persons in the appointment of a checkweigher, such owner, etc., shall be guilty of an offence against the principal Act.

Sections 13, 14 are also subject to the following provisions of the *Coal Mines (Weighing of Minerals) Act, 1905* ²:—

1. *Amendments of 50 and 51 Vict. c. 58, s. 13 as to checkweighers.*—(1) The power conferred by the principal Act on the persons employed in a mine, and paid according to the weight of the mineral gotten by them, to appoint a

¹ 57 & 58 Vict. c. 52, s. 1 ² Edw VII, c. 9

checkweigher, shall include power to appoint a deputy to act in the absence of the checkweigher, for reasonable cause, and the expression "checkweigher" when used in the principal Act and in this Act shall include any such deputy checkweigher during such absence as aforesaid.

(2) A statutory declaration, made by the person who presided at a meeting for the purpose of appointing a checkweigher or deputy checkweigher, to the effect that he presided at that meeting, and that the person named in the declaration was duly appointed checkweigher or deputy checkweigher, as the case may be, by that meeting, shall be forthwith delivered to the owner, agent, or manager of the mine, and shall be prima facie evidence of that appointment.

(3) Where the checkweigher or deputy checkweigher was appointed by a majority ascertained by ballot of the persons employed in the mine, and paid according to the mineral gotten, the declaration shall so state, and if he was not so appointed, then it shall state the names of the persons by whom or on whose behalf the checkweigher or deputy checkweigher was appointed. Where a checkweigher or deputy checkweigher is appointed by such a majority as aforesaid, he shall be deemed to be appointed on behalf of all the persons employed in the mine who are entitled to appoint him.

(4) The facilities to be afforded to a checkweigher under section 13 of the principal Act shall include provision for a checkweigher of a shelter from the weather containing the number of cubic feet requisite for two persons, a desk or table at which the checkweigher may write, and a sufficient number of weights to test the weighing-machine.

(5) When a checkweigher or deputy checkweigher is appointed by a majority ascertained by ballot of the

persons employed in the mine, and paid according to the mineral gotten, he shall not be removed by the persons employed in the mine except by a majority ascertained by ballot of the persons employed and paid as aforesaid at the time of the removal.

2. *Amendments as to persons who appoint and pay checkweighers.*—(1) For the purposes of the principal Act and of this Act the persons who are entitled under section 13 of the principal Act to appoint a checkweigher, and from whom he is entitled under section 14 of the principal Act to recover his wages or recompense, shall be deemed to include not only the persons in charge of the working places, but also all holers, fillers, trammers and other persons who are paid according to the weight of the mineral gotten.

(2) Where there are persons employed in a mine who are employed by a contractor who is himself paid according to weight of mineral gotten, such persons, if they are either in charge of the working places, or are holers, fillers, trammers, or brushers, shall, notwithstanding that they are paid by the contractor and otherwise than in accordance with the weight of mineral gotten, be deemed to be included among those who are entitled to appoint a checkweigher, and from whom he is entitled as aforesaid to recover wages or recompense, but the proportion of such wages or recompense recoverable in respect of such persons shall be paid by the contractor who employs them, and recoverable by the checkweigher from him alone.

(3) The wages or recompense which a checkweigher may recover under section 14 of the principal Act shall include expenses properly incurred by him in carrying out his work under the principal Act.

3. *Notice of intention to appoint checkweigher*—All persons who are entitled by the principal Act or this Act

to appoint a checkweigher or deputy checkweigher shall have due notice given to them of the intention to appoint a checkweigher or deputy checkweigher, by a notice posted at the pithead or otherwise specifying the time and place of the meeting, and have the same facilities given to each of them for the purpose of recording their votes either by ballot or otherwise in such appointment.

SECTION 15 OF THE ACT OF 1887

15. *Application of 41 and 42 Vict. c. 49 to weights, etc., used in mines.*—(1) The Weights and Measures Act, 1878, shall apply to all weights, balances, scales, steelyards, and weighing-machines used at any mine for determining the wages payable to any person employed in the mine according to the weight of the mineral gotten by him, in like manner as it applies to weights, balances, scales, steelyards, and weighing-machines used for trade.

(2) An inspector of weights and measures appointed under the said Act shall once at least in every six months inspect and examine in manner directed by the said Act the weights, balances, scales, steelyards, and weighing-machines used or in the possession of any person for use as aforesaid at any mine within his district; and shall also make such inspection and examination at any other time in any case where he has reasonable cause to believe that there is in use at the mine any false or unjust weight, balance, scale, steelyard, or weighing-machine.

(3) The inspector shall also inspect and examine the measures and gauges in use at the mines within his district, but nothing in this section shall prevent or interfere with the use of the measures or gauges ordinarily used at the mine

(4) An inspector may, for the purposes of this section, without any authorization from a justice of the peace, exercise at or in any mine, as respects all weights,

measures, scales, balances, steelyards, and weighing-machines used or in the possession of any person for use at or in that mine, all such powers as he could exercise, if authorized in writing by a justice of the peace, under section 48 of the Weights and Measures Act, 1878, with respect to any such weights, measures, scales, balances, steelyards, and weighing-machines as therein mentioned, and all the provisions of that section, including the liability to penalties, shall apply to such inspection.

(5) The inspector of weights and measures shall not, in fulfilling the duties required of him under this section, impede or obstruct the working of the mine.

Penalty.—See p. 153 and section 95 n., *ante*, p. 150.

WEIGHTS AND MEASURES ACTS

By the Weights and Measures Act, 1889,¹ every weighing instrument must be verified and stamped by the inspector. Anyone having in his possession for use an unstamped instrument is liable to a fine not exceeding £2, and for a second offence £5.

Sections 3, 4.—Any person using or having in his possession for use for trade any false weights, etc., or wilfully committing any fraud in using any weights, etc., is liable to a fine not exceeding £5, and for a second or subsequent offence to a fine not exceeding £20, and when he is convicted of a second or subsequent offence, and the Court is of opinion that such offence was committed with intent to defraud, he is liable in addition to or in lieu of any fine to imprisonment with or without hard labour for a term not exceeding two months.

By the Weights and Measures (Metric System) Act, 1897,² notwithstanding anything in the Weights and Measures Act, 1878, the use in trade of a weight or measure of the metric system shall be lawful, and nothing in section 19 of that Act shall make void any contract, bargain, sale, or dealing by reason only of its being made or had according to weights or

¹ 52 & 53 Vict. c. 21, s. 1.

² 60 & 61 Vict. c. 46.

measures of the metric system, and a person using or having in his possession such weights shall not by reason thereof be liable to any fine.

PART VII

INSPECTORS

APPOINTMENT OF INSPECTORS

97. *Appointment of inspectors of mines.*—(1) The Secretary of State may appoint any fit persons to be inspectors (under whatever title he may from time to time fix) of mines, and assign them their duties, and may award them such salaries as the Treasury may approve and may appoint a chief inspector with an office in London, and may remove any such inspector. Provided always that, in the appointment of inspectors of mines in Wales, and Monmouthshire, among candidates otherwise equally qualified, persons having a knowledge of the Welsh language shall be preferred

(2) Notice of the appointment of every such inspector shall be published in the London Gazette.

(3) Every such inspector is referred to in this Act as an inspector, and the inspector of a division means the inspector who is for the time being assigned to the division, district, or portion of the United Kingdom with reference to which the term is used.

(4) Any person who practises, or acts, or is a partner of any person who practises or acts as a land agent, or mining engineer, or as a manager, viewer, agent, or valuer of mines, or arbitrator in any difference arising between owners, agents, or managers of mines, or is a miners' agent or a mine-owner (whether the mine is one to which this Act applies or not), shall not act as an inspector of mines under this Act, and no inspector

shall be a partner or have any interest, direct or indirect, in any mine in the United Kingdom whether the mine is one to which this Act applies or not.

This section re-enacts subsections 1, 2, 3, and 5 of section 39 and substantially repeats section 40 of the Act of 1887.

POWERS AND DUTIES OF INSPECTORS

98. *Powers of inspectors.*—(1) An inspector under this Act shall have power to do all or any of the following things; namely,

- (i) to make such examination and inquiry as may be necessary to ascertain whether the provisions of this Act relating to matters above ground or below ground are complied with in the case of any mine.
 - (ii) to enter, inspect, and examine any mine, and every part thereof, at all reasonable times by day and night, but so as not to impede or obstruct the working of the mine
 - (iii) to examine into and make inquiry respecting the state and condition of any mine, or any part thereof, and the ventilation of the mine, and the sufficiency of the regulations for the time being in force in the mine, and all matters and things connected with or relating to the safety of the persons employed in or about the mine or any mine contiguous thereto, or the care and treatment of the horses and other animals used in the mine, and may take with him for the last-mentioned purpose a duly qualified veterinary surgeon
 - (iv) to exercise such other powers as may be necessary for carrying this Act into effect
- (2) The owner of every mine, his agents and servants, shall furnish the means required by an inspector as



necessary for an entry, inspection, examination, inquiry, or the exercise of his powers under this Act in relation to that mine.

(3) If any person wilfully delays an inspector in the exercise of any power under this section, or fails to comply with the requisition of an inspector in pursuance of this Act, or to produce any certificate or document which he is required by or in pursuance of this Act to produce, that person shall be deemed to obstruct an inspector in the execution of his duties under this Act.

(4) Every person who obstructs any inspector in the execution of his duty under this Act shall be guilty of an offence against this Act.

This section substantially repeats*section 41 of the Act of 1887. The power conferred on the inspector of taking down the pit a veterinary surgeon is new.

By subsection 2 of section 13 of the Truck Act, 1887, it is provided that it shall be the duty of inspectors of mines to enforce the provisions of the Truck Acts within their districts, and for this purpose that they shall have the same powers as they have for the purpose of enforcing the Mines Regulation Acts, and all expenses so incurred are to be defrayed out of moneys provided by Parliament.

Penalty for obstruction—For any breach of the provisions of this section, any person contravening the same is liable to the penalties provided by section 101, p. 171. So far as the owner, agent, and manager are concerned, they are protected by section 102, (1) and (3).

The civil responsibility of the owner is limited by the operation of section 102 (8). See generally section 75 n, pp. 112-7.

99. *Notice by inspector of causes of danger not expressly provided against*—(1) If in any respect (which is not provided against by any express provision of this Act, or by any regulation) any inspector finds any mine, or any part thereof, or any matter, thing, or practice in or connected with any mine, or with the control, manage-

ment, or direction thereof by the owner, agent, or manager to be dangerous or defective, so as in his opinion to threaten or tend to the bodily injury of any person, he may give notice in writing thereof to the owner, agent, or manager of the mine, and shall state in the notice the particulars in which he considers the mine or any part thereof, or any matter, thing, or practice, to be dangerous or defective, and require the same to be remedied or, if the same cannot be remedied, require the men to be withdrawn from the mine or part; and unless the same be forthwith remedied or the men withdrawn he shall also report the same to the Secretary of State.

(2) If the owner, agent, or manager of the mine objects to remedy the matter complained of in the notice or to withdraw the men he may, within seven days after receipt of the notice, send his objection in writing, stating the grounds thereof, to the Secretary of State; and thereupon the matter shall be determined in manner provided by this Act for settling disputes.

(3) If the owner, agent, or manager fails, when no objection is sent as aforesaid, to comply with the requisition of the notice within seven days after the expiration of the time for objection, or when there has been a reference to a referee to comply with the award within the time fixed by the award, he shall be guilty of an offence against this Act, and the notice and award shall respectively be deemed to be written notice of the offence.

Provided that the court, if satisfied that the owner, agent, or manager has taken active measures for complying with the notice or award, but has not, with reasonable diligence, been able to complete the works, may adjourn any proceedings taken before them for punishing the offence, and, if the works are completed within a reasonable time, no penalty shall be inflicted.

(4) No person shall be precluded by any agreement from doing, or be liable to any injunction, damages, penalty or forfeiture in respect of, such acts as may be necessary in order to comply with the provisions of this section.

This section re-enacts section 42 of the Act of 1887, with the important new provision giving power to the inspector to require, if the danger or defect in the mine cannot be remedied forthwith, the men to be withdrawn.

The inspector has no power to prescribe the nature of the remedy; his only power is to indicate the danger and require it to be remedied; so, if the matter in dispute be referred to arbitration, the arbitrator or umpire has no power to prescribe the remedy, but only to find that the matter before him is "dangerous or defective so as to threaten to tend to the bodily injury of any person" (*re Secretary of State and Fletcher*, 18 Q B D 339). In this case the arbitrator prescribed the use of safety lamps: held he had only power to find that the use of open lamps threatened or tended to bodily injury. Again, if the dangerous matter complained of is outside the control of the owner, agent, or manager the proper course is to proceed under section 49, rule 7, now section 67 of the Act (see p. 103). (*Reg. v Spon Lane Colliery Co.*, 3 Q B.D. 673)

100. *Annual reports of inspectors*—Every inspector of a division under this Act shall make an annual report of his proceedings during the preceding year to the Secretary of State, which report shall be laid before both Houses of Parliament; and the chief inspector shall make to the Secretary of State an annual report of the proceedings under this Act during the preceding year, and the report of the chief inspector shall be laid before both Houses of Parliament.

The section re-enacts section 43 of the Act of 1887; the second paragraph, relating to the chief inspector's report, is new.

PART VIII

SUPPLEMENTAL

LEGAL PROCEEDINGS

101. *Penalty for offences against Act* —(1) Every person employed in or about a mine, other than an owner, agent, or manager, who is guilty of any act or omission which in the case of an owner, agent, or manager would be an offence against this Act, shall be deemed to be guilty of an offence against this Act

(2) If a mine is not managed in conformity with this Act, the owner, agent, and manager thereof shall each be deemed to be guilty of an offence against this Act.

(3) Every person who is guilty of an offence against this Act for which a penalty is not expressly provided, shall be liable to a fine not exceeding, if he is an owner, agent, or manager, or under-manager, twenty pounds, and, if he is any other person, five pounds, for each offence; and, if an inspector has given written notice of any such offence, to a further fine not exceeding one pound for every day after such notice that such offence continues to be committed.

(4) Where a person is guilty of any offence against this Act which, in the opinion of the court that tries the case, is one which was likely to endanger the safety of the persons employed in or about the mine, or to cause serious personal injury to any of such persons, or to cause a dangerous accident, and was committed wilfully by the person act, personal default, or personal negligence of the person accused, such person shall be liable, if the court is of opinion that a fine will not meet the circumstances of the case, to imprisonment, with or without hard labour, for a period not exceeding three months.

This section is in substitution for sections 59 and 60 of the Act of 1887. Subsection 2 is new, and the penalty in subsection 3 is now raised from £2 to £5.

Statutory duty.—The criminal liability of owners, agents, and managers is limited (a) by the provisions of particular sections in which special protection is given, and (b) by the provisions of section 102 (1) and (3), p. 172, which are applicable to all offences against the Act. The civil liability of the owner is limited by section 102 (8), p. 174.

As to whether this duty is absolute or qualified, see section 75 n., pp. 112-7.

Penalty—Where a penalty is prescribed—and no specific penalties are prescribed, as was the case under the Act of 1887, for instance, a fine of £30 by section 38—subsection 2 of section 101 does not apply. “It only applies,” said Bruce, J., in *Stokes v Hill* [1901], 1 K B. at p. 496, “to a case where a person is guilty of an offence against the Act, for which a penalty is not provided.”

Section 68 of the Act of 1887 is not re-enacted. This section, provided that nothing should prevent any person from being indictable or liable under any other Act or otherwise to any other or higher penalty or punishment than was provided by the Act of 1887, provided that such person was not punished twice for the same offence.

There appears to be nothing in the present Act from preventing this principle from operating now.

102. *Prosecutions of owners, agents, managers, etc.*—

(1) Where proceedings are taken under this Act against the owner or agent of a mine in respect of an offence under this Act for which the owner, agent, or manager or each of them is liable under this Act, the owner or agent shall not be liable to any penalty if he proves to the satisfaction of the court—

(a) that he was not in the habit of taking and did not in respect of the matters in question take any part in the management of the mine; and

(b) that he had made all the financial and other

provision necessary to enable the manager to carry out his duties ; and

(c) that the offence was committed without his knowledge, consent, or connivance.

(2) Save as above provided, it shall not be a defence in any proceedings brought against the owner or agent of a mine under this Act in respect of such an offence as aforesaid that a manager of the mine has been appointed in accordance with this Act.

(3) Nothing in this Act shall render the owner, agent, or manager of a mine liable to a penalty in respect of any contravention of or non-compliance with the provisions of this Act, if he proves that the contravention or non-compliance was due to causes over which he had no control and against the happening of which it was impracticable for him to make provision.

(4) Nothing in this section shall be construed as preventing proceedings being instituted, in the first instance, against the manager for any offence for which the manager of the mine is liable under this Act

(5) No prosecution shall be instituted against the owner, agent, manager, or under-manager of a mine for any offence under this Act, not committed personally by such owner, agent, manager, or under-manager, which can be prosecuted before a court of summary jurisdiction, except by an inspector or with the consent in writing of the Secretary of State ; and in the case of any offence of which the owner, agent, manager, or under-manager of a mine is not guilty if he proves that he had taken all reasonable means to prevent the commission thereof, an inspector shall not institute any prosecution against such owner, agent, manager, or under-manager if satisfied that he had taken such reasonable means as aforesaid.

(6) A prosecution shall not be instituted against a coroner for any offence under this Act except with the consent in writing of the Secretary of State.

(7) If a boy or girl was employed on the representation of his or her parent or guardian that he or she was of an age at which his or her employment would not be in contravention of this Act, and under the belief in good faith that he or she was of that age, or if a person has been employed in any capacity or in any manner on his representation that he fulfilled the conditions as to age, experience, and otherwise necessary for such employment, and under the belief in good faith that such representation was true, the owner, agent, or manager of the mine and employer shall be exempted from any penalty, and the parent or guardian or the person making such representation, as the case may be, shall in respect of the misrepresentation, be guilty of an offence against this Act

(8) The owner of a mine shall not be liable to an action for damages as for breach of statutory duty in respect of any contravention of or non-compliance with any of the provisions of this Act if it is shown that it was not reasonably practicable to avoid or prevent the breach.

The provisions of subsections 1, 2, 3, 4, and 8 are new. Subsections 5 and 6 re-enact section 65 and subsection 7 re-enacts section 64 of the Act of 1887

Liability of owner, agent, or manager—In addition to the protection afforded to owners, agents, and managers by specific sections—and particularly by Part II of the Act—further protection is here extended to them for breaches of statutory duties, whether they are charged criminally or whether they are sued in a civil action for damages. Where the statutory duty is absolute, the liability is absolute, but where it is qualified the owner, agent, or manager may take advantage of the provisions of this section, provided he can bring himself within them. To do so the burden is upon him.

For the principles distinguishing absolute from qualified duties, see section 75, pp 112-7

No part in the management.—This provision confirms the decision in *Hall v Hopwood*, 49 L.J.M.C. 17 [1879], that if the owner be non-resident and takes no part in the management, he may escape liability. This, of course, subject to the proviso that he has appointed a duly qualified manager; made all financial and other necessary provisions, and that the offence was committed without his knowledge or connivance.

Appointment of qualified manager.—The decision in *Wynne v. Forrester*, 5 C.P.D. 361 [1879] that the agent may be convicted, although the mine is under the control of a duly certificated manager, is now, by subsection 2, made statutory. See also *Stokes v. Checkland*, 68 L.T. 457 [1893], and *Anderson v. Atkinson*, 99 L.T. 422, *ante*, p 51

It was held in *Stokes v. Mitcheson* [1902], 1 K.B. 857, that where an agent had appointed a qualified manager and sub-manager, whose duty it was to carry out the rules, and the violation of the rules was in no way caused by the agent omitting to enforce the rules, there was sufficient evidence to show that the agent had taken all reasonable means to prevent a contravention of the rules.

Liability under subsection 3—As to what is practicable or impracticable, see *Watkins v. Naval Colliery Co.* [1911], 2 K.B. at p 185, and *Butler (or Black) v. Fife Coal Co* [1912], A.C. 149. See also section 75 n., *ante*, p 115, where these cases are discussed

The manager is not liable to conviction for failing to do what does not properly belong to his office as manager; for instance, carrying out extensive alterations that properly appertain to the owner. The manager's duty is to make the best use of the means at his disposal, but of course this does not relieve him from the duty of bringing to the notice of his employers any defect or requirement of the mine (*Hall v Hopwood*, 49 L.J.M.C. 17)

Prosecution by inspector's agent—In a case decided under the corresponding section 35 of the Metalliferous Mines Regulation Act, 1872, it was held that an information against the owner or agent of a mine for an offence under that Act, which can be prosecuted before a court of

summary jurisdiction, may be laid in the inspector's name by an agent duly authorized by him in that behalf. (*Foster v. Fyfe* [1896], 2 Q.B. 104)

Duties of coroner.—These are defined by section 84, *ante*, p. 134.

Statutory age—By section 91, *ante*, p. 144, no boy may be employed below ground under the age of fourteen, and by section 92 no boy or girl may be employed above ground under the age of thirteen.

Statutory experience.—This is defined by section 73, *ante*, p. III.

Misrepresentation as to age.—By section 101 the parent or guardian found guilty of an offence under this section is liable to a fine not exceeding £5.

103. *Summary proceedings for offences, fines, etc.*—(1) All offences under this Act not declared to be misdemeanours, and all fines under this Act, and all money and costs by this Act directed to be recovered as fines, may be prosecuted and recovered in manner directed by the Summary Jurisdiction Acts .

Provided that—

- (i) It shall be sufficient to allege that the mine is a mine within the meaning of this Act, without more .
- (ii) The court shall, if required by either party, cause minutes of the evidence to be taken and preserved.

(2) Where proceedings are taken before a court of summary jurisdiction in respect of an offence against this Act alleged to have been committed in or with reference to a mine, a person who is the owner, agent, or manager of any mine, or a person employed in a mine, or the father, son, or brother, or father-in-law, son-in-law, or brother-in-law, of such owner, agent, manager, or person, or

who is an officer of any association of persons so employed, or who is a checkweigher appointed under the Coal Mines Regulation Acts, 1887 to 1905, or who is a director of a company which is the owner of a mine, shall not, except with the consent of both parties to the case, act as a member of the court.

This section re-enacts portions of sections 61 and 62, and section 69 of the Act of 1887. The first proviso in subsection 1 is new, so also is the provision relating to a checkweigher.

See the Summary Jurisdiction Act (11 & 12 Vict. c. 43, and 42 & 43 Vict. c. 49). As to Scotland, see Summary Procedure Act of 1864, and Summary Jurisdiction Act of 1881 (27 and 28 Vict. c. 53, and 44 & 45 Vict. c. 33); and as to Ireland, see Petty Sessions Act, 1881 (44 & 45 Vict. c. 18).

Statutory disqualification.—Two miners were charged before justices sitting as a court of summary jurisdiction with an offence under section 74 of the Act, alleged to have been committed in a mine. The information was dismissed. One of the magistrates who formed the court was a person employed in mining within the meaning of the section, but this fact was unknown to the prosecutor at the time of the hearing, and consequently he had not the opportunity of consenting or otherwise to this magistrate acting as a member of the court.

In an application for a writ of certiorari to quash the order dismissing the information, it was held that since the defendants had been acquitted a certiorari ought not to be granted, the maxim *Nemo debet bis vexari pro una et eadem causa* being applicable (*R. v. Simpson* [1914], 1 K.B. 66.)

104. *Appeal to quarter sessions.*—If any person feels aggrieved by any summary conviction under this Act by which imprisonment or a fine amounting to or exceeding one-half the maximum fine, is adjudged, he may appeal therefrom to quarter sessions

This section re-enacts section 63 of the Act of 1887, and by section 124 does not apply to Scotland. By section 31 (1) of the Summary Jurisdiction Act, 1879,¹ the appeal shall be

¹ 42 & 43 Vict. c. 49.

made to the prescribed court of General or Quarter Sessions, or, if no court is prescribed, to the next practicable court of General or Quarter Sessions having jurisdiction in the county borough or place for which the said court of summary jurisdiction acted, and holden not less than fifteen days after the day on which the decision was given upon which the conviction or order was founded.

There is no appeal from a conviction by a court of General or Quarter Sessions, but by section 40 of the Summary Jurisdiction Act, 1879, a special case may be stated by a court of General or Quarter Sessions for obtaining the judgment or determination of a superior court. For this purpose a writ of certiorari or other writ is not required.

In *R v Handley*, 9 L.T. 827 (1864), a court of Quarter Sessions stated a special case for the opinion of the High Court, having confirmed a conviction by the justices subject to the opinion of the High Court. It was held that the High Court had power to hear and determine the case, since the court of Quarter Sessions had only decided subject to the opinion of the High Court.

Appeal to High Court.—But this does not prevent appeal direct from a court of summary jurisdiction by way of a case stated to the King's Bench Division of the High Court of Justice, nor does it prevent application for a mandamus in the event of the justices refusing to hear and determine.

By section 2 of 20 & 21 Vict. c. 43, a case may be stated by a court of summary jurisdiction for the opinion of one of the superior courts of law to be named by the appellant, but the latter by section 14 is taken to have "finally and conclusively" abandoned his right of appeal to Quarter Sessions. Upon facts alone the justices have no power to state a case, except upon facts which raise a point of law. Where facts alone are in dispute, the proper course is by way of appeal to Quarter Sessions.

But it is only in cases originating by information or complaint in which a case can be stated under 20 & 21 Vict. c. 43, and in cases not so originating the proper remedy is by appeal to Quarter Sessions (see 42 & 43 Vict. c. 49, s. 33).

There are also modes of appeal to the High Court by writs of mandamus, certiorari, and prohibition. Either party may move for a mandamus when the justices decline to act; for a

writ of certiorari to cause a conviction of the justices or order to be moved into the King's Bench Division for the purpose of showing that the case was not one in which the justices had jurisdiction to do the act complained of; or for a writ of prohibition to stay the justices from proceeding further with a particular matter on the ground that they have no jurisdiction to entertain it.

105. *Application of fines.*—(1) Where a fine is imposed under this Act for neglecting to send a notice of any accident or for any offence against this Act which has occasioned loss of life or personal injury, the Secretary of State may (if he thinks fit) direct such fine to be paid to or distributed among the persons injured, and the relatives of any persons whose death may have been occasioned by the accident, or offence, or among some of them :

Provided that—

- (i) Such persons did not, in his opinion, occasion or contribute to occasion the accident, and did not commit and were not parties to committing the offence :
- (ii) The fact of the payment or distribution shall not, in any way, affect or be receivable as evidence in any legal proceeding relative to or consequential on the accident or offence.

(2) Save as aforesaid—

All fines recovered in England or Scotland under this Act shall be paid into the Exchequer ;

All fines recovered in Ireland under this Act shall be applied in manner directed by the Fines Act (Ireland), 1851,¹ and any Act amending the same.

This section re-enacts section 70 of the Act of 1887.

¹ 14 & 15 Vict. c. 90.

106. *Report of result of proceedings against workmen.*—Where the owner, agent, or manager of a mine has taken proceedings under this Act against any person employed in or about a mine in respect of an offence against this Act, he shall, within twenty-one days after the hearing of the case, report the result thereof to the inspector of the division.

This section re-enacts section 66 of the Act of 1887.

107. *Power to prohibit working of mine in which there is a contravention of the provisions of Part II.*—(1) The High Court, whether any other proceedings have or have not been taken, may, on the application of the Attorney-General, prohibit by injunction the working of any mine or any part of a mine in which there is such a contravention or non-compliance with the provisions of this Act, or the general regulations made thereunder, as appears to the Court calculated to endanger the safety of persons employed in the mine or part, and may award such costs in the matter as the Court think just, but this provision shall be without prejudice to any other remedy permitted by law for enforcing the provisions of this Act.

(2) Written notice of the intention to apply for such injunction in respect of any mine or part of a mine shall be given to the owner, agent, or manager of the mine not less than ten days before the application is made.

This section is in substitution for subsections 3 and 4 of section 16 of the Act of 1887. The expression "any part of a mine" is new

General regulations—See sections 86 and 87, pp. 137-8.

108. *Prohibition of use of dangerous machinery*—A court of summary jurisdiction may, on complaint by an inspector, and on being satisfied that any part of the machinery or plant used in a mine (including a steam boiler used for generating steam) is in such a condition

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or so placed that it cannot be used without danger to life or limb, prohibit its use, or, if it is capable of repair or alteration, prohibit its use until it is duly repaired or altered

This section is entirely new.

MISCELLANEOUS

109 *Protection of animals in mines.*—(1) The regulations contained in the Third Schedule to this Act (which relate to the care and treatment of horses and other animals in mines) shall be observed in every mine

(2) Any person who acts in contravention of or fails to comply with any of those regulations shall be guilty of an offence against this Act, and, in the event of any contravention of or non-compliance with any of those regulations by any person whomsoever, the owner, agent, and manager of the mine shall each be guilty of an offence against this Act unless he proves that he has taken all reasonable means, by publishing and to the best of his power enforcing those regulations, to prevent that contravention or non-compliance.

(3) The Secretary of State shall appoint fit persons to be special inspectors for the purpose of examining into the care and treatment of the horses and other animals used in mines, and of enforcing the provisions of this Act relating to horses and other animals, and any person appointed as a special inspector under this provision shall so far as necessary for the exercise of his powers and the performance of his duties as such inspector have the same powers as are given to and be subject to the same obligations and restrictions as inspectors of mines under the foregoing provisions of this Act, and the provisions of this Act relating to the obstruction of inspectors shall apply as if references to inspectors included references to special inspectors.

This section is entirely new.

Regulations.—See Third Schedule, p. 211.

Special inspectors.—So far as is necessary for carrying out the provisions of this section, special inspectors possess the same powers and lie under the same obligations as inspectors referred to in sections 97, 98, 99, and 100, pp. 166–70.

Statutory liability.—Every person who commits a breach of these regulations is liable to the penalties imposed by section 101, p. 171. The owner, agent, and manager where the offence has been committed by some person other than themselves may escape liability by proving that they had taken all reasonable means by publishing and to the best of their power enforcing the regulations. They are further protected by the provisions of section 102 (1), (2), and (3), p. 172, if they are able to bring themselves within its provisions. The owner is protected from civil liability provided he can show he is entitled to the protection afforded by section 102 (8), p. 174. See also section 75 n., p. 112.

110 *Application of Workmen's Compensation Act in case of men being trained for or engaged in rescue work.*—(1) Where provision has been made in pursuance of regulations under this Act, or under any order which has effect as if made under this Act, for the formation or training of a rescue brigade, any accident caused to a workman employed in or about a mine who is with the consent of his employer being trained as a member of the rescue brigade, and arising out of and in the course of his training, shall, for the purposes of the Workmen's Compensation Act, 1906,¹ be deemed to arise out of and in the course of his employment in the mine.

(2) Any workmen engaged in any rescue work or ambulance work at a mine shall, for the purposes of the Workmen's Compensation Act, 1906,² be deemed while so engaged to be employed by the owner of the mine.

This section is entirely new

Regulations.—See rules 138 to 149 of the General Regulations, dated 10 July, 1913,³ pp. 250–5.

¹ 6 Edw. VII, c. 58

² *Ibid.*

³ Statutory Rules and Orders, 1912, No. 748

III. *Application of certain provisions to railway sidings.* 63 and 64 Vict. c. 27.—(1) Where any line or siding, not being part of a railway within the meaning of the Railway Employment (Prevention of Accidents) Act, 1900, is used in connection with a mine the provisions of this Act with respect to—

(a) returns and notification of accidents ; and

(b) general and special regulations ;

shall have effect as if the line or siding were part of the mine, but, as respects such returns and notification of accidents, shall apply only in the case of accidents to persons employed by or on behalf of the owner of the mine.

(2) If any such line or siding is used in connection with more than one mine belonging to different owners, the foregoing provisions shall have effect as if the line or siding were a separate mine.

This section re-enacts section 3 of the Notice of Accidents Act, 1906.¹ The last seven lines are new.

Railway—By section 16 of 37 & 38 Vict. c. 40, this term means “any railway used for the purposes of public traffic, whether passengers, goods, or other traffic, and includes any works of the railway company connected with the railway.”

Lines or sidings.—Regulations applying to lines of rails of not less than 4 feet 8½ inches gauge and sidings, including lines or sidings under this section, and to the use of locomotives and wagons thereon, are contained in rules 150 to 171 inclusive of the General Regulations, dated 10 July, 1913,² *post*, pp. 255-8.

II2. *Payment of salaries and expenses*.—The salary and remuneration of inspectors and examiners under this Act and all other expenses incurred by the Secretary of State in the execution of this Act, to such an amount as may be

¹ 6 Edw. VII, c. 53

² Statutory Rules and Orders, 1913, No. 748.

sanctioned by the Treasury, shall be defrayed out of moneys provided by Parliament.

This section is in substitution for sections 28 (3), 31 (1), and 39 (5) of the Act of 1887.

113. Power of Secretary of State to determine questions — If any question arises (otherwise than in legal proceedings) whether a mine is a mine to which this Act or the Metalliferous Mines Regulation Acts, 1872 and 1875,¹ apply, the question shall be referred to the Secretary of State, whose decision thereon shall be final.

This section re-enacts section 71 of the Act of 1887.

114 Powers of Secretary of State as to making and revoking orders.—Any order of, or any exemption granted by, the Secretary of State under this Act may be from time to time revoked or altered by the Secretary of State, either unconditionally or subject to such conditions as he may see fit, and shall be signed by the Secretary of State or an under-secretary or assistant under-secretary

This section re-enacts section 72 of the Act of 1887.

115 Power of Secretary of State to purchase land.—
(1) The Secretary of State may purchase and hold land (including any easements in or over land) in the United Kingdom for the purpose of any experiments or tests which he may think desirable to carry out in connection with matters relating to the safety or health of persons employed in or about mines

(2) For the purpose of the purchase of land under this section, sections two and twenty of the Military Lands Act, 1892,² as amended by the Military Lands Act, 1900,³ shall apply as they apply for the purpose of the purchase

¹ 35 & 36 Vict. c. 77. 38 & 39 Vict. c. 39

² 55 & 56 Vict. c. 43 ³ 63 & 64 Vict. c. 56.

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of land by the Secretary of State under that Act as so amended.

This section is entirely new.

116. *Manner of settling disputes.*—Any matter which under this Act is to be settled in manner provided by this Act for settling disputes shall be referred to such one of the panel of referees appointed under this Act as may be selected in manner provided by rules made for the purpose, and the decision of the referee shall be final :

Provided that no such matter shall be so referred, unless the party making the objection or refusing compliance has served notice on the other party within the prescribed time and in the prescribed manner, and all objections not made within such time and in such manner shall be disregarded.

This section is entirely new.

Notice.—By Order dated 17 October, 1912, the Secretary of State, in pursuance of this section, has prescribed “ that the time within which and the manner in which the notice required by that section is to be served shall be as follows :—

- (1) The notice shall be served within 14 days after receipt of the order, requisition, refusal of sanction or notice to which the party serving the notice objects or with which he refuses to comply.
- (2) The notice shall be in writing and shall state the grounds of objection or of the refusal to comply.
- (3) The notice shall be sent by registered post and shall be addressed in the case of an order or notice of the Secretary of State to the Secretary of State, and in the case of a requisition or refusal of sanction or notice from an Inspector to the Inspector of the Division.

This Order does not apply to objections sent in pursuance of section 99 or of the Second Schedule to the Act.”¹

¹ Statutory Rules and Orders 1912, No. 1539.

117. *Appointment of referees.*—(1) Such number of persons as may be appointed by the reference committee hereinafter mentioned shall form a panel of persons to act as referees for the purposes of this Act

(2) The reference committee may make rules as to the mode in which the referee in any particular case is to be selected, the procedure before a referee, and the cost of the proceedings before a referee (including the remuneration of the referee).

(3) The reference committee shall consist of the Lord Chief Justice of England, the Lord President of the Court of Session, and such person specially qualified by eminence in mining knowledge as the Lord Chief Justice and the Lord President may select

This section is entirely new.

Reference rules—The following rules, dated 8 January, 1913, have been made in pursuance of section 117 by the Reference Committee constituted under that section —

1. These rules may be cited as the Coal Mines (Reference) Rules, 1913.¹

2.—(1) In these rules, unless the context otherwise requires,—

“The Act ” means the Coal Mines Act, 1911

“The Secretary of State ” means the Secretary of State for the Home Department.

“Matter for reference ” means—

- (a) any objection to General Regulations proposed to be made under the Act which is required to be referred to a referee by Part I (4) of the Second Schedule to the Act, or is referred by the Secretary of State to a referee under Part I (6) or (7) of that Schedule, or
- (b) any objection to Special Regulations proposed to be made under the Act which is required to be referred under Part II (4) of the Second Schedule to the Act ; or
- (c) any matter required by the Act to be settled in manner provided by the Act for settling disputes.

¹ Statutory Rules and Orders, 1913, No. 10

“ Parties to the reference ” means—

- (a) in the case of a reference relating to any objection to General Regulations proposed to be made under the Act, the Secretary of State and any body of persons who have made a general objection as defined by Part I (8) of the Second Schedule to the Act, or any person or body of persons who have submitted an objection referred by the Secretary of State to a referee under Part I (6) or Part I (7) of the said Schedule ;
- (b) in the case of a reference relating to an objection to Special Regulations, the Secretary of State, the person or body of persons proposing the Special Regulations, and the person or body of persons making objection thereto ; or
- (c) in the case of any other reference, the Secretary of State or one of His Majesty's Inspectors of Mines and the person making objection or refusing compliance with the provisions of the Act in regard to which the matter for reference has arisen.

(2) The Interpretation Act, 1889, applies for the purpose of the interpretation of these rules as it applies for the purpose of the interpretation of an Act of Parliament.

3. In the case of any matter for reference arising, the Secretary of State shall send to the Reference Committee a statement setting forth the matter for reference, and, in the case of an objection to General or Special Regulations proposed to be made under the Act, a copy of such proposed General or Special Regulations, together with a copy of the objection or objections, and shall inform the Committee that a reference is necessary.

4 The referee shall be selected by the Reference Committee from the panel of persons appointed by them to act as referees for the purposes of the Act, and, in making the selection, the Committee shall have regard to the nature of the matter for reference and shall consider any joint representations made by some or all of the parties in regard to the person to be appointed

5.—(1) As soon as the Reference Committee have selected the referee, they shall inform the parties to the reference of the name and address of the referee selected.

(2) The Reference Committee shall furnish the referee with copies of the documents submitted to them by the Secretary of State in connection with his application for the reference.

6. In the case of a reference relating to any objection to General Regulations proposed to be made under the Act, the referee, if he considers that he requires the assistance of a person or persons possessing legal or special knowledge to act as assessor or assessors to him at the hearing, may apply to the Reference Committee to appoint such person or persons for the purpose.

7.—(1) The referee selected shall, as soon as may be, proceed to fix the time for the hearing of the reference, which shall not be less than three days or more than 21 days from the time of his appointment, unless the Reference Committee for special cause shown approve an extension of this period, and he shall forthwith serve notice by post on the parties to the reference of the time and place fixed by him for the hearing of the reference.

(2) Unless otherwise directed by the Reference Committee, or by the referee, the hearing by the referee of the reference shall be in private. It shall be open to the parties to the reference to appear at the hearing either in person or by solicitor or counsel or agent.

(3) (a) In the case of a reference relating to proposed General Regulations, if a substantial number of the owners or of the workmen affected thereby who have not made a general objection to the proposed Regulations apply to the referee for permission to be represented at the hearing of the reference, the referee shall require the applicants to submit a statement in writing of the grounds on which they desire to be heard, and, unless he is of opinion that the application is frivolous or is not made by a substantial number of the owners or of the workmen affected by the proposed Regulations, he shall allow the applicants to attend and take part in the proceedings.

(b) In the case of a reference relating to Special Regulations, the owner or a majority of the workmen, if he or they have not made objection to the proposed Regulations, may apply to the referee for permission to take part in the proceedings at the hearing of the reference, and on receipt of such application the referee shall allow the applicant or applicants to attend and take part in the proceedings.

(c) Where the referee has granted an application made by a number of owners or of workmen under paragraph 3 (a) or 3 (b) of this rule for permission to take part in the proceedings at the hearing of a reference, he may require the applicants to appear at the hearing by solicitor or by counsel or by agent.

(4) The referee may make such inspection of any mine or mines affected by the reference as he may deem necessary.

(5) The referee may adjourn the hearing from time to time so far as may be consistent with the prompt settlement of any question affecting the safety of workmen in the mine or mines, and may hold adjourned sittings at any place which he thinks necessary for the convenience of the parties to the reference.

(6) Subject to the provisions of these rules, the proceedings at the hearing of a reference shall be such as the referee may in his discretion direct.

8. The referee shall cause copies of his decision to be furnished to the parties to the reference as soon as possible after the hearing.

9. The Reference Committee may, in the case of the death or incapacity of the referee originally selected, or in any other case, if it is shown to the Committee that it is expedient to do so at any time before the referee has given his decision, revoke the reference to the selected referee, and select another referee for the purpose of determining the reference.

10 Any failure on the part of any authority or any person to comply with the provisions of these rules, shall not render the proceedings on a reference to a referee, or anything done in pursuance thereof, invalid, unless the referee so direct.

11.—(1) The remuneration of the referee shall (a) if the matter for reference relates to a general objection to General Regulations, be a sum of 15 guineas for each day on which he is engaged in hearing the reference, together with any expenses for travelling and subsistence necessarily incurred ; (b) in all other cases, be a sum of 10 guineas for each day on which he is engaged in hearing the reference, together with any expenses for travelling and subsistence necessarily incurred : provided that in any case of exceptional difficulty a special fee may be paid on the recommendation of the Reference Committee with the approval of the Treasury.

(2) The remuneration of an assessor shall be a sum of 10 guineas for each day on which he sits as assessor to the referee,

together with any expenses for travelling and subsistence necessarily incurred

12. The cost of the proceedings, including the remuneration of the referee and of the assessor, if appointed, shall be payable in such manner as the referee may direct

118. *Procedure for ascertaining views of workmen*—The Secretary of State may make rules prescribing the procedure to be observed for ascertaining and certifying the views of the workmen, or any part of the workmen, in any mine, or any class of mines, in any case where those views are required to be ascertained for any of the purposes of this Act.

This section is entirely new.

Procedure.—Rules prescribing the procedure to be observed in ascertaining and certifying the views of the workmen, together with forms, are contained in an Order of the Secretary of State dated 22 June, 1912,¹ as follows:—

1. In any case where the views of the workmen or any part of the workmen in any mine are required to be ascertained for any of the purposes of the Act, they shall, unless a ballot is expressly required by the Act, be ascertained by a show of hands at a meeting of the workmen entitled to vote of which not less than three days' notice shall be given by a notice posted at the pithead specifying the time and place of meeting. A certificate stating the result of the voting and signed by the person presiding at the meeting shall be forthwith delivered to the owner, agent, or manager of the mine.

2. If within seven days after a meeting as aforesaid the owner, agent, or manager of the mine, or not less than one-tenth of the workmen entitled to vote by signed notice served on the owner, agent, or manager, demand a ballot, or if the Secretary of State in any matter in which he is concerned by notice served on the owner, agent, or manager, directs that a ballot shall be taken, or in any case where the Act requires a ballot to be taken, a ballot shall be taken in the manner hereafter provided.

3. Within 21 days after the date of the meeting or after the receipt of a notice as aforesaid as the case may be, or

¹ Statutory Rules and Orders, 1912, No. 634.

(in a case where the Act requires the views of the workmen to be ascertained by ballot) after receipt of a notice signed by not less than one-tenth of the persons employed at the mine that it is desired that a ballot shall be taken, the manager shall cause a register to be prepared of the workmen entitled to vote.

4 The register shall be open to inspection by the workmen at the mine and by the checkweigher or other representative of the workmen as hereinafter defined, for at least one week before the ballot is taken.

5. The taking of the ballot shall be carried out by a representative of the owner, agent, or manager, and the checkweigher or other representative of the workmen, and shall take place on the second Saturday after the completion of the register, or any earlier day agreed upon by the said representatives.

6. The hours during which the ballot shall be taken shall be such hours as may be agreed upon by the said representatives, or, in default of agreement, between 8 a.m. and 8. p.m.

7 Notice of the purpose for which and the place at which the ballot is to be taken and the day and hours fixed for the ballot shall be posted by the said representatives at the pithead not less than three days before the day fixed for the ballot.

8. The ballot paper shall be in the form set out in the Schedule hereto, and shall not be marked in any way whatsoever so as to identify the person voting.

9. A ballot shall be delivered by the said representatives to any person applying to them and entitled to vote, who shall forthwith mark his vote thereon, fold the paper so as to cover the mark, and deposit it in a box to be provided for the purpose.

10. Arrangements shall be made to enable a workman to mark his vote screened from observation.

11. The ballot papers shall be examined and the votes counted by the said representatives, and a certificate in the form set out in the Schedule hereto of the result of the ballot and of the total number entitled to vote shall be signed by them in duplicate : one copy to be retained by the representative of the workmen, the other copy to be delivered to the owner, agent, or manager, who in the case of any matter

under sections 86 and 87 and the Second Schedule to the Act, shall forward it forthwith to the Secretary of State.

12 If any dispute arises as to how any particular ballot paper shall be counted, the matter shall be referred to the Inspector of Mines for the Division, who shall decide the matter so as to give effect, as far as possible, to the intention of the person voting and whose decision shall be final.

Schedule

A.—FORM OF BALLOT PAPER FOR USE EXCEPT IN THE CASE OF ELECTION OF WORKMEN'S REPRESENTATIVES

Are you in favour of¹

Write "Yes" or "No" in the space below.

B.—FORM OF BALLOT PAPER FOR USE IN ELECTION OF WORKMEN'S REPRESENTATIVES

Election of Workmen's Representatives

Names of candidates.	Place a cross below against the name of each Candidate for whom you wish to vote You must not vote for more than

¹ Specify question on which the poll is to be taken, e.g.—

[Accommodation for taking baths and drying clothes being provided at the mine]

[Accommodation for taking baths and drying clothes being provided no longer at the mine]

[The wages of persons employed in or about the mine being paid weekly]

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C.—FORM OF CERTIFICATE OF RESULT OF BALLOT

We, the undersigned, representing respectively the owner, agent, or manager of the _____ Mine, and the workmen employed at the said mine, hereby certify that on the _____ a ballot was duly taken, in accordance with the rules made by the Secretary of State, on the question¹

and that the result of the ballot was as follows :—

Number voting in favour _____ ,
 Number voting against _____ ,

or, in case of election of workmen's representatives—

Names of candidates.	Votes recorded.

Total number of workmen employed at the mine and entitled to vote _____ .

Signed { 1.
 2.

Dated this _____ day of _____ , 19 _____ .

¹ Specify question on which the poll was taken, *e.g.* .

[Whether accommodation for taking baths and drying clothes should be provided at the mine.]

[Whether accommodation for taking baths and drying clothes should no longer be provided at the mine]

[Of the election of the representatives of the workmen on the Baths Committee]

[Whether the wages of all persons employed in or about the mine should be paid weekly.]

119 *Provisions as to exemptions granted by inspectors.*—
 Any exemption granted by the inspector of a division under this Act shall be in writing and signed by him.
 Any such exemption may—

(a) be granted either absolutely or subject to such

- restrictions and conditions as the inspector thinks fit to impose ;
- (b) be revoked at any time by the inspector of the division for the time being.

This section is entirely new.

120. *Service of notices.*—All notices under this Act shall be in writing and all notices and documents required by this Act to be served or sent by or to an inspector may be either delivered personally, or served and sent by post ; and in proving such service or sending it shall be sufficient to prove that the letter containing the notice was properly addressed and put into the post.

This section is in substitution for section 73 of the Act of 1887.

Service.—There is an obvious error in the drafting of this section. After the word “inspector” it should, we submit, read as follows : “may be either served personally or sent by post.”

121. *Pulling down or defacing notices.*—Every person who pulls down, injures, or defaces any abstract, notice, summary, proposed regulations, or regulations, when posted up in pursuance of the provisions of this Act, or any notice posted up in pursuance of the regulations of the mine, shall be guilty of an offence against this Act.

This section re-enacts section 58 of the Act of 1887.

Regulations of the mine.—This expression means the general and special regulations approved and issued by the Secretary of State.

Penalty.—By section 101, p. 171, every person guilty of offence other than the owner, agent, and manager, is liable to a fine not exceeding £5.

122. *Interpretation*—In this Act, unless the context otherwise requires,—

“Mine” includes every shaft in the course of being sunk, and every level and inclined plane in the

course of being driven, and all the shafts, levels, planes, works, tramways, and sidings, both below ground and above ground, in and adjacent to and belonging to the mine, but does not include any part of such premises on which any manufacturing process is carried on other than a process ancillary to the getting, dressing or preparation for sale of minerals :

“ Main airway ” means an airway commencing from, or terminating at, a shaft or outlet to the surface, or any airway from which a split is taken to ventilate any district of the mine, or into which a split so taken returns :

“ Ventilating district ” means any part of a seam having an independent intake airway commencing from a main intake airway and an independent return airway terminating at a main return airway :

“ Office at the mine ” means an office on the surface of the mine .

“ Small mine ” means a mine in which the total number of persons employed below ground does not exceed thirty :

“ Owner,” when used in relation to any mine, means any person or body corporate who is the immediate proprietor or lessee or occupier of any mine, or of any part thereof, and in the case of a mine the business whereof is carried on by a liquidator or receiver includes such liquidator or receiver, but does not include a person or body corporate who merely receives a royalty, rent, or fine from a mine, or is merely the proprietor of a mine subject to any lease, grant, or licence for the working thereof, or is merely the owner of the soil, and, not interested in the minerals of the mine ; but any contractor for the working of

any mine, or any part thereof, shall be subject to this Act in like manner as if he were an owner, but so as not to exempt the owner from any liability :

“ Agent,” when used in relation to any mine, means any person appointed or acting as the representative of the owner in respect of any mine, or of any part thereof, and as such superior to a manager appointed in pursuance of this Act :

“ Prescribed ” means prescribed by the Secretary of State :

“ Boy ” means a male under the age of sixteen years :

“ Girl ” means a female under the age of sixteen years :

“ Woman ” means a female of the age of sixteen years or upwards.

This section is in substitution for section 75 of the Act of 1887.

Mine.—Where there were two seams worked by separate gangs as one mine it was held in *Thorpe v. Davies* [1908], 2 K.B. 750, that the two seams constituted a mine within the meaning of section 13.

In and adjacent to and belonging to a mine.—These words were held in *Turnbull v. Lambton Collieries*, 82 L.T. 589 [1900], to mean physically adjacent to the mine itself and not merely to the mine-owner

A colliery company, owners of a coal mine and a siding, contracted to carry sand from a pit on the main line to the siding. The haulage was done by an engine belonging to the colliery company, whose brakesman was killed on the main line near the siding whilst uncoupling the wagons. It was held in *Menaghan v. United Collieries, Ltd.*, 3 F. 149 [1900], that, although the work was outside the proper business of the employer, the workman was engaged locally about the mine.

And where a man was engaged in blasting large boulders for the purpose of making a road, preparatory to working a mine, and was injured about six yards from the mouth of the tunnel, it was held in *Ellison v. Longden*, 18 T.L.R. 48 [1901], that he was employed on, in, or about a mine.

In *Anderson v. Lochgelly Iron and Coal Co., Ltd.*, 7 F. 187 [1904], a mine was connected with a main line by a private

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line about a mile and a quarter in length. About 800 yards from the mine there was a drum-house and sidings connected with the latter. Here an engine-driver in the employ of the mine-owners was killed. It was held that the accident occurred on, in, or about a mine.

Regulations for docks, wharves, etc.—Docks, wharves, quays, etc. (in, about, or adjacent to a mine), used for loading, etc., minerals, are subject to certain regulations which have been made by the Secretary of State (24 October, 1904¹) under the Factory and Workshop Act for the processes of loading, unloading, etc., carried on at such places. These must be carefully observed.

Owner includes any one of two or more co-owners.* It is no defence for one owner that there are other owners who ought to be charged with him. (*R v Brown*, 7 E. and B. 757)

A tenant, whether under a lease or an agreement or otherwise, is a "lessee," and therefore an "owner." A person who has been a lessee, but whose lease has expired, is not an "owner." (*Stott v Dickinson*, 34 L.T. [N.S.] 291.)

A person who "merely receives a royalty, rent, or fine," etc., is not an owner, because he is also lessee. (*Arkwright v. Evans*, 49 L.J.M.C. 82.)

The words "interested in the minerals" mean having a pecuniary interest. *ib.*, these words apply only to the words "or is merely the owner of the soil," and not to either of the two classes of persons previously excluded from the definition of "owner."

Where a lease of mines for a term, subject to a rent and royalties, with power of distress and re-entry, is still in force and undetermined, but the mines had been abandoned, the lessors were held to be "owners" as "persons interested in the minerals of the mine" (*Evans v. Lady Mostyn*, 2 C.P.D. 552.)

123 *Saving for existing managers, firemen, and owners and agents.*—Nothing in this Act shall—

- (a) prevent any person who is less than twenty-five years of age from acting as manager of a mine, if he was lawfully so acting at the date of the passing of this Act; or

¹ S. R. and O., 1904, No. 1617, p. 146.

(b) prevent any person acting as a fireman, examiner, or deputy, notwithstanding that he—

(i) neither is the holder of a first or second-class certificate of competency under this Act, nor is twenty-five years of age or upwards and has had at least five years' practical experience underground in a mine ; or ,

(ii) has not obtained a certificate of his ability to measure the quantity of air in an air-current, if he was employed as a fireman, examiner, or deputy at the date of the passing of this Act ;

(c) prevent any owner or agent of a mine taking part in the technical management of the mine, notwithstanding that he is not qualified under this Act to be a manager, if he was taking part in the technical management of the mine at the time of the passing of this Act.

This section is entirely new.

Technical management : see section 2 n., p. 6.

124. *Application to Scotland*.—This Act shall apply to Scotland subject to the following modifications :—

(1) " Attorney-General " means Lord Advocate ; " information " means complaint ; " summons " means citation ; " High Court " means Court of Session , " injunction " means interdict ; " county court " means sheriff court ; " local education authority " means school board ; " licensed premises as defined by the Licensing (Consolidation) Act, 1910," means certificated premises within the meaning of the Licensing (Scotland) Act, 1903 ;¹ " section ninety-one of the Public Health Act, 1875," means section sixteen of the

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Public Health (Scotland) Act, 1897;¹ “receiver” includes a trustee in bankruptcy; “attending on subpœna before a court of record” means attending on citation the High Court of Justiciary, and any reference to a Court of Record shall be construed accordingly; “master of the Supreme Court” means auditor of the sheriff court; “county court judge” means sheriff; “London Gazette” means “Edinburgh Gazette”.

- (2) The provision relating to an appeal to quarter sessions shall not apply.

This section is in substitution for section 76 of the Act of 1887.

125. *Application to Ireland.*—This Act shall apply to Ireland subject to the following modifications:—

- (1) In hearing and determining a charge under this Act, a court of summary jurisdiction elsewhere than in the Dublin metropolitan police district shall be constituted of two or more justices of the peace or of a resident magistrate, with or without other justices, sitting in petty sessions; and a resident magistrate means a magistrate appointed pursuant to the Constabulary (Ireland) Act, 1836.²
- (2) Section one hundred and seven of the Public Health (Ireland) Act, 1878, shall be substituted for section ninety-one of the Public Health Act, 1875.³
- (3) “Police or stipendiary magistrate” means resident magistrate; “master of the Supreme Court” means a taxing master of the High Court of Justice in Ireland; “London Gazette” means “Dublin Gazette”; “Attorney-General” means Attorney-General for Ireland:

¹ 60 & 61st Vict. c. 38.

² 6 & 7 Will. IV, c. 36.

³ 41 & 42 Vict. c. 52.

- (4) The Licensing Act, 1872,¹ shall be substituted for the Licensing (Consolidation) Act, 1910.

This section is in substitution for section 77 of the Act of 1887.

126. *Repeal*.—The enactments mentioned in the Fourth Schedule to this Act are hereby repealed to the extent mentioned in the third column of that Schedule :

Provided that—

- (a) Nothing in this repeal shall affect any order made by the Secretary of State or any certificate of competency or of service granted, or having effect as if granted, under any enactment repealed by this Act which is in force immediately before the commencement of this Act, but every such order and certificate shall have effect as if made or granted under this Act; and the register of holders of certificates, and the other registers which at the commencement of this Act are kept in pursuance of the Acts hereby repealed, shall be deemed to be registers or parts of registers kept in pursuance of this Act :
- (b) Nothing in this repeal shall affect any special rules which at the commencement of this Act are in force under any Act hereby repealed in any mine, but such rules shall, until regulations affecting the mine and revoking such rules have been made under this Act, have effect as if they were the regulations of the mine under this Act .
- (c) Nothing in this repeal shall affect the tenure of office of any inspector appointed under any enactment repealed by this Act .
- (d) Any document referring to any Act repealed by this Act, or to any enactment thereof, shall be construed to refer to this Act, and to the corresponding enactments thereof :

¹ 35 & 36 Vict. c. 94.

- (e) This Act shall apply to offences under such of the provisions of the Coal Mines Regulation Acts, 1887 to 1908, as are unrepealed by this Act in like manner as if they were offences against this Act, and expressions in those provisions shall have the same meaning as in this Act.

127. *Short title and commencement*—(1) This Act may be cited as the Coal Mines Act, 1911

(2) This Act shall, except as otherwise provided, come into operation on the first day of July nineteen hundred and twelve

SCHEDULES

FIRST SCHEDULE

FORM OF ANNUAL RETURN ¹

This Form must be correctly filled up by the Owner, Agent, or Manager, and sent to the Inspector of the Division on or before 21st January, every year.

PART A

Year ending 31st December, 19 .

Name of Mine _____

Situation of Mine _____

County _____

Postal Address of the Mine _____

Name and Address of {
Owner { _____

Name of Manager _____

No. of his Certificate _____

Name of Under-manager _____

No. and Class of his Certificate _____

PART A.—*continued*RETURN of persons ordinarily employed, etc.—*continued*

Name or number of Pit	Statute tons of minerals gotten										Number of days in each month on which Coal or Ironstone has been drawn															
	Coal ¹ including small or slack		Firedlay		Ironstone (raw)		Oil Shale		Other minerals			Total tons	Total days	January	February	March	April	May	June	July	August	September	October	November	December	
	Amount the pit month	Amount the pit month	Value at the pit month	Amount the pit month	Value at the pit month	Amount the pit month	Value at the pit month	Amount the pit month	Value at the pit month	Description																
Totals																										

¹ The total Coal won, including Coal used for Colliery consumption, must be given.

III.—SAFETY LAMPS .

Name and description ¹ of lamp (¹ No of gauzes and whether shielded or not)	Number in use	Method of locking				Kind of illuminant				
		Lead rivet	Magnetic	Screw	Other	Coal or colza and petroleum	Petroleum	Volatile spirit	Electricity	Other illuminant

State the method of lighting the lamps, *e g* , by electricity, internal igniters, or otherwise_____

PART D

TYPE AND AGGREGATE HORSE-POWER OF ELECTRICAL
APPARATUS

1.—System of supply (whether continuous current or alternating current)	
Voltage of supply	
Periodicity (if alternating current)	
Source of supply	
2.—Voltage at which current is used for—	
Lighting	
Power	
3.—Aggregate H.P. of motors installed on surface for—	
Winding	
Ventilation	
Haulage	
Pumping	
Coal washing or screening	
Miscellaneous	
Total H.P.	
4.—Aggregate H.P. of motors installed below ground for—	
Haulage	
Pumping	
Portable machinery	
Miscellaneous	
Total H.P.	
5.—Total H.P. (addition of 3 and 4)	

(Signed) _____ Owner, Agent, or Manager.

Date _____

SECOND SCHEDULE

PART I

PROCEDURE FOR MAKING GENERAL REGULATIONS¹

1. Before the Secretary of State makes an order he shall publish in such manner as he may think best adapted for informing persons affected, notice of the proposal to make the order and of the place where copies of the draft order may be obtained, and of the time (which shall not be less than thirty days) within which any objections made with respect to the draft order by or on behalf of persons affected must be sent to the Secretary of State.

2 Every objection must be in writing and state—

- (a) the specific grounds of objection ;
- (b) the omissions, additions, or modifications asked for.

3 The Secretary of State shall consider any objection made by or on behalf of any persons appearing to him to be affected which is sent to him within the required time, and he may, if he thinks fit, amend the draft order, and the foregoing provisions shall apply to the amended draft in like manner as they apply to the original draft.

4 If after the publication of the notice with respect to any such draft order (whether an original or amended draft), any general objection as hereinafter defined is made within the required time with respect to the draft and not withdrawn, the order shall not be made by the Secretary of State until that objection has been referred to such one of the panel of referees appointed under this

¹ Sections 86 and 87.

Act as may be selected in manner provided by the rules made for the purpose.

If on any such reference the referee considers that the draft order should be varied to meet the objection, he shall recommend any variation which he considers necessary or expedient, and effect shall be given to those recommendations in the order, if made.

5. The reference committee may appoint any person or persons possessing legal or special knowledge to act as assessor or assessors to the referee.

6. If the Secretary of State considers that any objection, though not a general objection, is of such a character that it is desirable to refer it to a referee, he may so refer it, and in that case the foregoing provisions shall apply as in the case of a general objection.

7. If any objection, though not a general objection, is made on behalf of the owners of mines or any particular class of mines in any separate area, and it is alleged in the objection that having regard to the special natural conditions or special methods of working in mines of that class or mines in that area the proposed regulations ought not to apply to those mines, the Secretary of State shall, unless he is of opinion that the objection is frivolous, refer it to a referee, and in that case the foregoing provisions shall apply as in the case of a general objection.

8. For the purposes of this section a "general objection" means an objection made either by or on behalf of owners of mines employing not less than one-third of the total number of men employed at the mines affected by the proposed order, or, if the order contains different provisions for different classes of mines, of the total number of men employed in any such class of mines,

or by or on behalf of not less than one-third of the total number of men so employed.

The number of men employed shall be calculated in accordance with the returns for the last preceding year sent by owners of mines to the inspectors in pursuance of the provisions of this Act

PART II

PROCEDURE IN CASE OF SPECIAL REGULATIONS SENT TO SECRETARY OF STATE FOR APPROVAL

1. Where any special regulations have been sent under this Act to the Secretary of State for approval he shall consider the regulations and either approve or disapprove the same.

Where the Secretary of State disapproves the special regulations, no further action shall be taken in the matter.

Before the Secretary of State approves the special regulations there shall be published, in such manner as he may think best adapted for informing persons affected, notice of the proposal to make the regulations and of the place where copies of the draft regulations may be obtained and of the time (which shall not be less than thirty days) in which any objections with respect to the draft regulations made by or on behalf of persons affected must be sent to the Secretary of State.

2. Every objection must be in writing and state—

- (a) the specific grounds of objection ;
- (b) the omissions, additions or modifications asked for.

3. The Secretary of State shall consider any objection made by or on behalf of persons appearing to him to be affected which is sent to him within the required time, and he may, before approving the special regulations,

require such amendments to be made therein as he may think fit.

4. If the owner or a majority of workmen who have sent any objection to any special regulations sent for approval feel aggrieved by the refusal of the Secretary of State to give effect to their objection; the objection shall be referred to such one of the panel of referees appointed under this Act as may be selected in manner provided by the rules made for the purpose.

If, on any such reference, the referee considers that the regulations should be varied to meet the objection, he shall recommend any variation which he considers necessary or expedient, and the Secretary of State, before approving the regulations, shall require that variation to be made.

THIRD SCHEDULE¹

1. No horse shall be taken underground until it is four years old and until it has been tested by a duly qualified veterinary surgeon in the prescribed manner and certified to be free from glanders.

2. All horses underground shall, when not at work, be housed in properly constructed stables, and in stalls of adequate size.

3. All stables in use shall be separated from any road used for travelling or haulage of minerals, and shall be continuously and thoroughly ventilated with intake air, and cleaned daily and kept in a sanitary condition, and all roofs, walls, and partitions of any stables shall, unless painted or made of slate, tiles, glazed brick or iron, be limewashed at least once in every three months.

¹ Sections 86 and 109.

4. Competent persons, hereinafter referred to as "horse-keepers," shall be appointed in writing by the manager to have the care of the horses used underground while in the stables, and of the stables, in the proportion of at least one horse-keeper to every fifteen horses

5. A sufficient supply of wholesome food and pure water shall be provided daily for every horse while in the stable and while at work.

6. A sufficient supply of suitable medicines, ointments, and dressings, and a suitable appliance or appliances for the destruction of horses requiring to be destroyed, shall be provided and kept readily available for use.

7. No horse shall be worked, or allowed by the horse-keeper to go out to work, in an unfit condition, or improperly shod, or otherwise than with harness properly fitting and in good condition, including a guard for the eyes.

8. The driver having charge of any horse shall remain in charge of the horse during the whole time that it is at work in his shift, and, unless otherwise ordered, shall at the end of the shift return the horse to the horse-keeper at the stable.

9. No blind horse shall be worked in a mine.

10. The driver having charge of any horse shall at once report to the official under whose direction he works any injury to or overworking of the horse or any insufficiency in the supply of food or water, and any case in which the horse or harness rubs against the roof or sides, or in which the harness is defective

11. The horse-keeper shall, as soon as practicable after the return of any horse to the stable, examine the horse and its harness, attend to any injury to the horse, and

clean and groom it himself, or cause it to be cleaned and groomed.

12. Every official under whose direction the driver of any horse works and every horse-keeper shall at once report to the manager or under-manager any case of sickness in or injury to or any marks of ill-treatment on or any overworking of any horse coming to his notice, and any defect in the harness likely to cause pain or injury to the horse, and no horse with respect to which any such report is made shall be allowed to go out to work until authority in that behalf is given by the manager or under-manager.

13. Every horse-keeper shall keep a record in a book to be kept at the mine of all horses under his care, and shall make a daily report therein as to the condition of each horse, the driver in whose charge it has been, the time at which it was taken from the stables, and the time at which it was returned thereto.

14. Every book kept by a horse-keeper under the foregoing provisions of this schedule shall be open to inspection by any special inspector.

15. The manager shall, by himself or by some competent person appointed by him for the purpose, exercise such personal supervision over all horse-keepers, drivers, and other persons employed in connection with the horses used in the mine as is necessary to secure that the provisions of this Act relating to the care and treatment of horses in mines are observed in the mine.

16. The owner, agent, or manager shall, as part of the return required to be made annually to the inspector of the division, furnish a statement showing the number of horses used in the mine, the number which have died during the year from injury by accident or from disease,

or which require to be destroyed in consequence of injury or disease, and the number of other cases of injury or ill-treatment reported to the manager under the provisions of this schedule.

17. In this schedule the expression " horse " includes pony, mule, and donkey.

Testing for glanders.—By Order dated 17 May, 1912, horses before being taken underground shall be tested for glanders by a duly qualified veterinary surgeon in the following manner :—

- (1) The test shall consist of the hypodermic injection of mallein followed by the taking of the temperature of the animal at the 6th, 9th, 12th, 15th, and 20th hours respectively after the injection.
- (2) The animal to be tested shall rest for 24 hours before the test is applied.
- (3) The physiological variation of the animal's temperature shall be noted before the test is applied.
- (4) The test shall not be applied to any animal while showing an abnormal temperature.
- (5) The animal shall not be worked for a period of 30 hours after the injection.
- (6) The mallein used for the test shall be obtained from the Royal Veterinary College and shall be used in the dose specified by the College ¹

¹ Statutory Rules and Orders, 1912, No. 497.

FOURTH SCHEDULE

ENACTMENTS REPEALED¹

Session and Chapter	Short title	Extent of repeal
50 & 51 Vict. c. 58.	The Coal Mines Regulation Act, 1887.	The whole Act, except sections 1, 3, 12, 13, 14, 15.
59 & 60 Vict. c. 43	The Coal Mines Regulation Act, 1896.	The whole Act.
63 & 64 Vict. c. 21.	The Mines (Prohibition of Child Labour Underground) Act, 1900.	The whole Act so far as it relates to mines to which this Act applies.
3 Edw. 7. c. 7.	The Coal Mines Regulation Act (1887) Amendment Act, 1903.	The whole Act.
6 Edw. 7. c. 53.	The Notice of Accidents Act, 1906.	Sections 1, 2, 3, 5, so far as they relate to mines to which this Act applies
7 Edw. 7. c. 10.	The Employment of Women Act, 1907.	Section 1, so far as it relates to the Coal Mines Regulation Act, 1887.
10 Edw. 7. & 1 Geo. 5. c. 15.	The Mines Accidents (Rescue and Aid) Act, 1910.	The whole Act, so far as it relates to mines to which this Act applies.

¹ Section 126.

GENERAL REGULATIONS

STATUTORY RULES AND ORDERS, 1913

No. 748

MINES

COAL MINES ACT

GENERAL REGULATIONS, DATED JULY 10, 1913, MADE BY THE SECRETARY OF STATE, UNDER SECTION 86 OF THE COAL MINES ACT, 1911 (1 & 2 GEO. V, c. 50).

In pursuance of section 86 of the Coal Mines Act, 1911, I hereby make the following Regulations, and direct that they shall apply to all mines to which that Act applies.

These regulations shall come into force on the expiration of two months after the date of the *London Gazette* in which the notice that they have been made by the Secretary of State is published ¹

In these regulations "the Act" means the Coal Mines Act, 1911.

PART I

GENERAL

1. It shall be the duty of the manager and under-manager to carry out and to the best of their ability enforce the provisions of every Order in force under the Act regulating the supply, use, and storage of explosives, and it shall be the duty of all persons employed in or about the mine to comply with the provisions of the said Orders.

2. Every notice required by the regulations of the mine to be posted up shall be posted up in some conspicuous place where it may be conveniently read or seen by the persons

¹ The notice of the making of the regulations was published in the *Gazette* of 15 July, 1913.

affected, and so often as it becomes defaced, obliterated, or destroyed, shall be renewed with all reasonable dispatch.

3. No person shall enter the cage until authorized to do so by the onsetter or banksman, as the case may be ; or leave the cage until it shall have stopped at the landing-place, and persons, while waiting at the top or bottom of the shaft or any entrance into the shaft or while in the cage shall behave in an orderly manner and shall obey the directions of the banksman or onsetter, as the case may be, and shall not impede the banksman or onsetter in the discharge of his duties.

The banksman or onsetter, as the case may be, shall not, when persons are being raised or lowered, signal the cage away until the gates or other rigid fences with which the cage is provided are in position, and no person other than an official or person authorized in writing by the manager to give signals shall while riding in the cage interfere with the gates or fences.

4. Subject to any directions that may be given by any official of the mine, no workman shall, except so far as may be necessary for the purpose of getting to and from his work or in case of emergency or other justifiable cause necessarily connected with his employment, go into any part of the mine other than that part in which he works, or travel to or from his work by any road other than the proper travelling road.

5. Every workman engaged at the face, or in stonework, or in timbering shall carefully examine his working place before commencing work and before recommencing work after the firing of a shot, and after any interruption of work during the shift. Where several persons are working together and one of them is in charge, the examinations required by this regulation shall be made by the man in charge.

6. Where the work of erecting the supports of the roof and sides of the working places is done by the workmen employed therein, it shall be the duty of the workmen to carry out the requirements of section 50 of the Act, and to comply with the directions contained in the notice required by that section.

7. If any person shall cause, or become aware of, any obstruction in or interference with the ventilation, or of any

stagnation or impurity in the air, of any part of the mine, or of any dangerous defect in any part of the roof or sides, or of any other source of danger, he shall, if it falls within the scope of his duties to remedy such obstruction, interference, stagnation, impurity, defect, or other source of danger, immediately proceed to take the steps necessary for the purpose, and if not he shall immediately inform the manager, under-manager, fireman, examiner, or deputy, or other official, and shall, if he is working at the place where the danger exists, cease all work at that place.

8. If a sufficient supply of material for supporting the roof and sides of any working place is not available at the place appointed by the Act, the workman shall withdraw from the working place and report the circumstance to the fireman, examiner, or deputy or other official, and a note of the report shall be entered by the person to whom it is made in the report for the day, if any, which he may be required to make.

9. No person shall, without authority, pass beyond any fence or danger signal or open any locked door.

10. No person shall deface or remove any notice which may be set up, or any marks which may be made in any part of the workings for the guidance of the workmen or for any other proper purpose connected with the working of the mine.

11. No person shall brush or waft out gas.

12. No person shall allow any burning wick or part of a wick or other burning material to lie about in the mine, and every workman on leaving his working place shall take his light or lights with him.

13. Every person using a safety lamp shall examine the same externally, and assure himself that it is locked and in good order before entering the mine, and shall from time to time while in the mine examine the lamp to see that it is in safe working order, and he shall, when he has completed his shift, return the lamp to the lamp-room. If the lamp is injured while in his possession, he shall at once carefully extinguish the light.

14. No person shall place a safety lamp on its bottom unless it is necessary to do so for the safe performance of any

particular work or unless authorized by the manager; and in all cases whilst a person is at work it shall be placed at least two feet from the swing of the pick, hammer, or other tool.

15. Should any person find himself in the presence of inflammable gas, he shall not throw away his lamp nor attempt to blow it out, but shall shelter it, hold the lamp near the floor, avoid jerking it, and take it steadily into fresh air. If the gas fires in the lamp where he cannot take it into fresh air, he shall smother out the light or extinguish it in water.

16 No person shall, when trying or examining for the presence of gas with a safety lamp, raise the lamp higher than may be necessary to allow the presence of gas to be detected.

17. Every workman working at the face shall to the best of his power carry on his work so as at all times to leave a free passage for the air-current. He shall also to the best of his power leave his working place at the end of his shift in such condition as to allow of work being safely resumed therein; and if he finds it impossible to do so he shall fence it off and report the fact as soon as possible to the fireman, examiner, or deputy, or other official.

18 Every person having occasion to pass through any door or canvas screen or flap shall carefully close the same.

19 No person shall sleep whilst below ground in the mine or whilst in charge of any winding, hauling, ventilating, or signalling machinery or apparatus, or boilers.

20. No unauthorized person shall work or interfere with any signalling apparatus in or about the mine

21.—(a) The onsetter at any entrance into a shaft which is provided with a fence not worked by the cage or cages, shall not begin to remove the fence until either the cage is stopped at the entrance or it has reached such a position in the shaft that by the time the fence is removed the cage will be opposite the entrance, and shall close the fence immediately he has signalled the cage away, and shall not permit any other person to remove the fence while he is on duty.

(b) Reasonable protection against things falling down the shaft shall be provided for persons engaged in loading or unloading cages.*

22. No person shall attempt to go on or across the uncovered space of the shaft bottom, except for the purpose of working in the shaft bottom, and no person shall be allowed to work in such space unless the cages are stopped.

23. Trams run for the conveyance of workmen, whether above or below ground and whether on the premises of a mine or on a line or siding to which section 111 of the Act applies, shall be under the entire control of a person appointed to accompany and have charge of the tram, and no person shall attempt to get into or out of the train when in motion nor ride upon the footboard (if any) or upon the buffers or couplings, nor refuse to comply with the directions of the person in charge nor in any way obstruct or interfere with such person in the discharge of his duties, and any person failing to comply with this regulation, shall be reported by the person in charge to the manager or under-manager.

24. Every person having charge of a horse, pony, mule, or donkey shall drive it carefully and shall observe any directions that may be given to him by the horse-keeper or by the official under whose direction he works.

25.—(a) No person below ground shall ride upon any animal, nor, except by permission of the manager or under-manager, upon any tram, tub, or other contrivance drawn by a horse or other animal.

(b) No person shall ride on any haulage rope.

26. No person when taking a tub by hand down an incline of which the gradient exceeds one in twelve shall go in front of the tub ; and in every case where the conditions are such that a person cannot control the tub by hand from behind, he shall not take the tub down unless some contrivance is provided to enable him to control the tub

27. No person shall be in or about the mine in a state of intoxication, or, without permission of the manager, take or bring any intoxicating liquor on or in the mine, and no person shall throw any stone or other missile, or fight or behave in a violent manner, in or about the mine.

28 No person employed in or about the mine shall negligently or wilfully do anything likely to endanger life or limb in the mine, or negligently or wilfully omit to do any-

thing necessary for the safety of the mine or of the persons employed therein.

29. Every workman receiving in or about the mine any personal injury caused by an explosion of gas or dust or any explosive or by electricity or overwinding or any other special cause specified by an Order under section 80 (1) (iii) of the Act, or any personal injury causing him to absent himself from his work, shall as soon as possible report the same to one of the officials, and if required by the official shall forthwith proceed to the appointed place for First Aid treatment.

30. The manager shall appoint a competent person or persons to keep a correct record of the number of persons going below ground and returning from below ground daily, and if required by the manager every person shall immediately before going below ground and after returning from below ground record his presence in accordance with a system approved by the inspector of the division.

31. The manager shall cause to be posted up at the pit-head where it may be conveniently seen by the persons employed a sketch plan of the mine showing the main roads, the means of egress from each part of the mine to the surface, and the telephone stations underground, and so often as the same becomes defaced, obliterated, or destroyed, shall cause it to be renewed with all reasonable dispatch.

32. Where by the Act or regulations of the mine any duty is imposed upon or authority given to any fireman, examiner, or deputy, that duty in cases of emergency may be fulfilled or that authority exercised by and at the discretion of any official his superior at the mine and duly qualified to perform such duties.

33. Every person before engaging any helper, drawer, or other assistant shall acquaint the manager, under-manager (if any), or any other official of the mine superior to the firemen, examiners, or deputies, and obtain his sanction.

34. Every official of the mine shall carry out the duties assigned to him by the manager, and shall carry out and enforce those provisions of the Act and of the Regulations and Orders made thereunder which relate to the matters in respect of which such duties have been so assigned.

THE MANAGER

35. The manager shall appoint in writing to be officials of the mine such number of competent persons as will be sufficient to secure a thorough supervision of all the operations in or about the mine and the enforcement of the requirements of the Act and of the Regulations and Orders made thereunder. He shall assign their duties to the several officials of the mine, and shall to the best of his power see that each official understands and carries out and enforces those provisions of the Act and of the Regulations and Orders made thereunder which relate to the matters in respect of which duties are assigned to him.

36. He shall give attention to and cause to be carefully investigated, any representations or complaints that may be made to him as to any matter affecting the safety or health of persons in or about the mine.

37. He shall appoint the stations required by section 63 and the lamp stations, if any, in pursuance of section 34 (i) (iii) of the Act, and cause their positions to be indicated by notices constructed of durable material.

38. He shall see that a sufficient supply of proper materials and appliances for the purpose of carrying out the provisions of the Act and ensuring the safety of the mine and persons employed therein is always provided, and, if he be not the owner or agent of the mine, he shall report in writing to the owner or agent when anything is required for the aforesaid purpose that is not within the scope of his authority to order.

39. He shall determine and state in a notice which shall be kept posted up at the pit-head the number of persons to be allowed to ride in a cage at one time, or, where a cage has more than one deck, on each deck of the cage. When men are being raised from the pit bottom, if more than one deck is used, the top deck shall be loaded with men first, but this shall not apply when the decks are simultaneously loaded or when a balanced platform is used for loading the cages.

40. If no under-manager has been appointed for the mine, the manager shall carry out the duties imposed by these Regulations on the under-manager

THE UNDER-MANAGER

41. It shall be the duty of the under-manager, as well as of the manager, to enforce to the best of his power the provisions of the Act and of the Regulations and Orders made thereunder, and he shall give (subject to the control of the manager) such directions as may be necessary to ensure compliance with those provisions and to secure the safety of the mine and the safety and health and proper discipline of the persons employed therein.

42. He shall give attention to and cause to be carefully investigated, any representations or complaints that may be made to him as to any matter affecting the safety or health of persons in or about the mine.

43. He shall, unless an official between himself and the firemen, examiners, or deputies has been appointed, make arrangements for their meeting him daily for the purpose of conferring on matters connected with their duties; and shall also make arrangements to meet the other underground officials daily for the like purpose.

44. He shall to the best of his power see that all necessary materials and appliances are sent into the districts as required, and he shall report at once to the manager any deficiency in the supply of such materials and appliances.

45. He shall from time to time carefully examine all travelling parts of the mine whether frequented by workmen or not.

OFFICIALS OTHER THAN THE MANAGER AND UNDER-MANAGER
AND THE FIREMEN, EXAMINERS, OR DEPUTIES

46. Every person appointed by the manager to be an official of the mine shall to the best of his power see that the persons under his charge understand and attend to their respective duties.

47. When any person is appointed to be an underground official of the mine superior to the firemen, examiners, or deputies but inferior to the manager or under-manager, he shall be a person of not less than twenty-three years of age holding either a second-class certificate of competency or a

fireman's certificate under the Act. He must also have had at least three years' practical experience underground in a mine.

48. When any person is appointed to be an underground official of the mine superior to the fireman, examiner, or deputy, but inferior to the manager and the under-manager—

- (a) He shall confer daily during his shift with the firemen, examiners, or deputies and other officials of the mine or that part of the mine in respect of which he is appointed, on matters connected with the state of the mine or that part of the mine, and if the mine is worked by a succession of shifts he shall not leave the mine without communicating with the person succeeding him, if any, and shall give him such information as may be necessary for the safety of the mine and of the persons employed therein
- (b) He shall examine daily the reports of the firemen, examiners, or deputies under his charge, and see that they are properly recorded.

FIREMEN, EXAMINERS, AND DEPUTIES

The following regulations shall not apply to shafts in the course of being sunk

49. Each fireman, examiner, or deputy shall in the district of the mine assigned to him carry out in a thorough manner all his statutory duties. He shall to the best of his power see that the workmen under his charge understand and carry out their respective duties under the Act and Regulations and Orders made thereunder and any directions with a view to safety which may be given to them.

50. The examination which the fireman, examiner, or deputy is required to make before the workmen enter the district, shall be commenced and completed within the two hours immediately preceding the commencement of work in the district. On the completion of the inspection he shall proceed to the appointed station where he shall either meet the workmen and instruct them as to their places of work and as to any special precautions necessary to be observed by them, or report to the incoming fireman all information necessary to enable the latter to do so.

Where safety lamps are required to be used, a competent person shall externally examine the safety lamp of every workman before passing the station and see that it is in safe working order and securely locked, before permitting him to go beyond such station

A fireman, examiner, or deputy shall check the number of workmen under his charge, and shall record the number in his report.

51. Where in any place danger from gas or any other cause is found by him he shall fence off all the approaches to the place so that it cannot be inadvertently entered, and shall mark the place by a danger signal

52. If the mine is worked by a succession of shifts he shall not leave the mine without conferring with the fireman, examiner, or deputy succeeding him, and shall give him such information as may be necessary for the safety of his district and of the persons employed therein.

53. If any case of damage to a safety lamp in his district is reported to him or comes to his notice, he shall ascertain and record in his report the cause and nature of the damage.

54. He shall see that all doors, stoppings, brattice, and fences in his district are maintained in good order.

55. Where brattice or air pipes are required by the manager or under-manager to be used for the ventilation of the working places the fireman, examiner, or deputy shall see that they are kept sufficiently advanced to ensure that an adequate amount of air reaches the working faces.

56. He shall from time to time during his shift examine for gas at the ripping or brushing, and also at the edges of the gob, goaf, or waste, and shall observe the condition of the roof in the gob, goaf, or waste so far as it can be seen from the edges thereof.

57. He shall see that every ventilation door is so fixed and maintained that it will fall to and close automatically, and shall also to the best of his power see that no such door is fastened, or propped, back on its hinges.

58. If he finds any of the ropes, chains, signals, brakes, jig wheels, and posts, or other apparatus in actual use in his district, to be in an unsafe condition, he shall stop the use of the same.

59. He shall report as soon as may be to a superior official all accidents, dangerous occurrences, or defects which may come to his knowledge.

60. Where one of the two ways affording means of egress from the district to the surface, provided in accordance with section 36, subsection 3, of the Act, is not ordinarily used for travelling he shall travel at least once in every quarter the whole of such way, in order to make himself thoroughly acquainted with the same.

61. At the termination of work of a shift in a district the fireman, examiner, or deputy who is in charge of the district before he himself leaves the district, or other competent person appointed by the manager or under-manager for the purpose, shall ascertain that all unnecessary lights are extinguished, that all main doors are closed, and that the ventilation is taking its proper course. This requirement, so far as it refers to doors and ventilation, shall not apply where the shift is succeeded by another shift so that work is carried on without any interval in the district, nor shall it apply so far as it refers to lights where the shift is succeeded by another shift which is timed to enter the district within 15 minutes of the preceding shift leaving.

62. He shall have power to send out of the mine any workman under his charge infringing or attempting to infringe any provision of the Act or Regulations or Orders made thereunder or failing to carry out any direction given him with regard to safety, and shall report in writing any such infringement or attempted infringement or failure to the manager or under-manager at the end of his shift.

WINDING ENGINEMEN

For the purpose of the following regulations, cage includes kibble.

63. Every winding engineman (unless some other competent person is specially appointed for the purpose by the manager) shall, at the commencement of or during his shift, carefully examine the external parts of his engine, the drum, the ropes upon the drum, the brakes, the signal bell, and the indicator showing the position of the cage in the shaft, and the automatic contrivance, if any, for preventing overwinding.

If any defect likely to affect the proper working of the engine is discovered then or at any other time, he shall not commence or continue winding until the matter has been reported to the manager, or under-manager, or to the official under whose direction he works, and he shall not resume winding until instructed to do so by the manager, under-manager, or official as aforesaid.

64. Unless some other person is specially appointed for the purpose, he shall during his shift keep the engine and apparatus connected therewith under his charge properly cleaned and oiled.

65. He shall on no pretext leave the handles whilst the engine is in motion, or when anyone is in the cage.

66. Should a signal be given indistinctly, or should he have any doubt about a signal, he shall on no account set his engine in motion until a fully understood signal is received.

67. Before raising or lowering any person after any cessation of winding exceeding two hours, he shall run the cage or cages at least once between the shaft top and the lowest drawing level in order to ascertain whether everything is in order, and if any defect is discovered likely to affect the proper working of the winding apparatus he shall not commence winding until the matter has been reported to the manager or under-manager, or to the official under whose direction he works, and he is instructed to do so by the manager, under-manager, or official as aforesaid.

68. He shall not allow any unauthorized person to be in the engine house, nor shall he, without the written permission of the manager or of the official under whose direction he works, allow anyone to work the engine. He shall in no circumstances permit anyone, except with the authority in writing of the manager, to work the engine while persons are being raised or lowered in the shaft.

PERSONS IN CHARGE OF VENTILATING MACHINES

The following regulations shall not apply to any auxiliary fan placed underground, which does not contribute to the general ventilation of the mine or of any ventilating district of the mine.

69. The owner, agent, or manager shall cause to be provided in connection with every ventilating fan driven by mechanical power a water gauge and either an automatic indicator registering the number of revolutions of the fan or an automatic indicator registering the water gauge.

70. The person in charge of any ventilating machinery driven by mechanical power shall keep the machinery running at the speed ordered by the manager or under-manager, and shall examine the machinery and observe the indicators at intervals which in the case of mines in which safety lamps are required by the Act or the regulations of the mine to be used shall be of not more than half an hour or such longer time as may be approved by the inspector of the division, and in the case of other mines shall be of not more than two hours.

71. He shall immediately report to the official under whose direction he works any damage to, or defect or derangement in, the machinery.

72. He shall from time to time observe the ventilating pressure as indicated by the water gauge, and where an automatic indicator registering the water gauge is not in use, he shall at the end of each period of two hours enter in a book to be provided by the manager the number of revolutions of the fan and the pressure shown by the water gauge at the end of the period.

73. In the event of a stoppage of the machinery or of any unusual variation of the water gauge he shall at once inform the official under whose direction he works.

THE BOILER MINDER

74 The person appointed to attend to any boiler shall from time to time throughout the day examine the boiler feed-apparatus, safety valves, and other fittings, and dampers, and see that they are in good working order; and shall at once report to the official under whose direction he works any defect or derangement in the same.

75 He shall not, except with the authority of the official under whose direction he works, alter or permit anyone to alter the weight of any safety valve, and only weights made for the purpose shall be used on any safety valve.

76. He shall maintain the water in each boiler as nearly as practicable at the proper working level, but if it becomes too low, he shall at once lower the dampers, and damp down the fire and if necessary draw the same, and report the circumstance to the official under whose direction he works. He shall also see that the pressure of steam fixed by the manager is on no account exceeded.

PART II

AIR MEASUREMENTS. [SECTION 29, SUBSECTION 2]

77. The points at which the quantity of air shall be measured in pursuance of subsection 2 of section 29 of the Act shall be as follows :—

- (a) In the main intake airways of every seam as near as practicable to the downcast shaft,
- (b) In every split as near as practicable to the point at which the split commences, and
- (c) In each ventilating district at or as near as practicable to a point 100 yards back from the first working place at the working face which the air enters.

USE OF ELECTRIC LAMPS OTHER THAN LOCKED SAFETY LAMPS. [SECTION 32]

78. In any mine or part of a mine in which safety lamps are required to be used, electric lamps, if enclosed in air-tight fittings and having the lamp globes hermetically sealed, may, subject to the provisions of the Act and any regulations made thereunder as to the use of electricity in mines, be used within the following limits .—

- (a) On main intake airways and haulage roads ventilated by intake air up to within 300 yards of the first working place at the working face which the air enters
- (b) On main return airways within 300 yards of the bottom of the upcast shaft if that shaft is regularly used for the purpose of winding persons or minerals, but not within 300 yards of the last working place at the working face which the air leaves.

CHARACTER OF WINDING APPARATUS, ETC.

[SECTION 40 (1)]

79. In every mine which is not a small mine the apparatus for raising and lowering persons to or from the surface, hereinafter called the winding apparatus, in any shaft which is more than 150 feet in depth, shall be worked by mechanical power.

80. Winding apparatus worked by mechanical power :—

- (a) shall be so designed, constructed, and maintained that, with the power provided, the raising and lowering of persons can be carried out with ease, regularity, and safety ;
- (b) if installed after the date on which these regulations come into force, shall have the drum shafts, if 10 inches or more in diameter, bored longitudinally at the centre ;
- (c) shall be firmly connected to a rigid foundation so as to prevent any material movement of the apparatus as a whole.

81. Where winding apparatus is worked by other than mechanical power it shall be efficiently constructed and maintained, and provided with a locking device or brake sufficient in itself to hold the load in the shaft at any point.

82. All cage chains in general use shall be annealed once at least in every six months and detaching hooks shall be cleaned and refitted once in every three months.

CAPPING OF WINDING AND HAULING ROPES. [SECTIONS 40 (5) AND 46.]

83. No mode or type of capping shall be used which fails to withstand a strain .

- (a) in the case of a winding rope, of at least seven times the weight of the maximum load carried at any time by the rope ;
- (b) in the case of a hauling rope, of at least 60 per cent of the breaking strain of the rope.

84. A competent person appointed in writing by the manager, shall, whenever a winding rope is capped or re-

capped, superintend the work, and see that it is properly carried out.

85. In no case shall the capel of a round winding rope be attached to the rope by the use of rivets passing through the rope.

86. In those forms of capping in which the wires at the end of the rope are bent back on the rope itself to form a cone, wedges of a soft metal or wedges formed by the lapping of soft wire shall be placed between the rope and that portion which is bent back. This regulation shall not apply to hauling ropes if mineral only is hauled or if the gradient is less than 45 degrees.

87. If white metal is used in the capping of ropes, the composition of the white metal shall be such that its melting point is under 750 degrees Fahr.

88. Where white metal is used in the capping of ropes the untwisted wire shall be thoroughly cleaned, and, before the white metal is poured into the socket, the latter shall be heated or warmed.

EXEMPTIONS FROM THE PROVISION REQUIRING TWO
MAIN INTAKE AIRWAYS. [SECTION 42 (1)]

89 The provision in section 42, subsection (1), of the Act requiring two main intake airways shall not apply

- (a) To any seam the coal of which is so liable to spontaneous combustion that the provision of a second main intake airway in such seam would increase the risk of fire.
- (b) To any seam where, owing to the character of the strata or the nature of the pressure, the cost of making or maintaining two main intake airways in that seam might be so great as to prevent the same being worked at a profit.
- (c) To any part of a seam where the mineral field leased or owned is not of sufficient width to allow the distances required by the regulations of the mine to be maintained between the roads in such part.
- (d) To mines of stratified ironstone in the Cleveland District, to mines of oil shale, or to mines in any other

district as respects which the Secretary of State is satisfied that similar conditions prevail.

- (e) To any mine in which the number of persons employed below ground does not at any one time exceed one hundred.
- (f) To any seam which is naturally wet throughout.

If any question arises as to whether any of the foregoing exemptions applies to a mine or seam, that question shall be determined in the manner provided by the Act for settling disputes.

90. The distance from the downcast shaft within which the two main intake airways shall not be required to be provided shall be the distance between the shaft and the edge of the shaft pillars. In the case of an inclined shaft or level entrance not driven in the coal seam the distance shall be the distance between the point where the shaft or entrance strikes the seam and the edge of the pillar left to support the shaft or entrance. In the case of an inclined shaft or level entrance driven in the coal seam, the distance shall be two hundred yards from the mouth of the shaft or entrance.

CONSTRUCTION OF STOPPINGS [SECTION 42 (3)]

91.—(a) All stoppings between main intake and main return airways shall either .

- (i) be constructed of tight stone, dirt, sand, or rubbish packing at least five yards thick, or
- (ii) be constructed of tight stone, dirt, sand, or rubbish packing at least three yards thick, and have the end of the packing nearest the intake airway faced with a wall of masonry, brickwork, or concrete not less than 9 inches thick, the face of which shall be covered with a coating of mortar so as to prevent leakage of air.
- (b) The space between the face of the stopping and the roadway shall be kept clear.
- (c) This regulation shall apply only to mines in which coal is worked, and shall not apply to any mine in South Staffordshire which is liable to spontaneous combustion in the unworked coal.

SIGNALLING (EXCEPT IN SINKING PITS). [SECTION 53.]
WINDING

92. The following signals shall be used at all times in connection with winding in shafts :—

(a) For winding persons :—

(1) When a person is about to descend the banksman shall signal to the onsetter 3

Before the person enters the cage the onsetter shall signal to the banksman and to the winding engineman 3

When the person is in the cage and ready to descend the banksman shall signal to the winding engineman 2

(2) When a person is about to ascend the onsetter shall signal to the banksman and to the winding engineman 3

Before the person enters the cage the banksman shall signal to the onsetter 3

When the person is in the cage and ready to ascend the onsetter shall signal to the banksman and to the winding engineman— 1

(b) For winding otherwise than with persons :—

To raise up 1

To stop when in motion 1

To lower down 2

To raise steadily 4

To lower steadily 5

93. The manager shall, in the case of a mine where there are entrances into the workings from the shaft at different levels, prescribe the signals to be used to indicate the level to which the cage is to be sent, and in respect of movements of the cage between one level and another level, and shall fix any other signals that may be required

94. A notice shall be posted in the engine house, and at the pithead, and at each entrance into the workings from the shaft, containing the foregoing signals and the signals fixed by the manager in pursuance of the preceding regulation.

95. In connection with every winding engine there shall be provided an appliance which shall automatically indicate in a visible manner to the winding enginemán (in addition to the ordinary signal) the nature of the signal until the signal is complied with.

96. No other person than the banksman or onsetter shall give any signal unless he is an official of the mine or is authorized in writing by the manager to give signals.

97. The foregoing regulations, 92 to 95, shall not come into operation until 1 July, 1914.

HAULING

98. The following signals shall be used in all mines in connection with underground haulage, worked by gravity or mechanical power :—

(a) Direct or Main Rope Haulage —

To stop	..	..	..	..	..	1
To lower	..	..	..	..	..	2
To wind up	..	..	..	..	..	3

(b) Haulage (other than endless rope or chain haulage) on self-acting inclines :—

To stop	..	..	..	..	..	1
To lower	..	..	..	..	..	2

When persons are about to travel up or down the incline 4

This signal shall be acknowledged by signalling 4

(c) Main-and-tail rope haulage .—

To stop	..	..	..	..	..	1
To haul inbye	..	..	..	..	..	2
To haul outbye	..	..	..	..	..	3
To slack out tail-rope	..	..	..	..	..	4
To tighten tail-rope	..	..	..	..	..	5
To slack out main-rope	..	..	..	..	..	6
To tighten main-rope	..	..	..	..	..	7

(d) Endless-rope (or endless-chain) haulage —

To commence hauling	..	..	..	..	2
To stop hauling	..	..	..	..	1

99. When persons are about to be conveyed inbye or outbye, each of the signals required by the foregoing regula-

tions to be given when a set or train of tubs is about to be hauled inbye or outbye, as the case may be, shall be preceded by a cautionary signal of 8

100. The manager shall, in the case of a mine where there are several districts, prescribe the additional signals to be used to indicate the districts; and shall fix any other signals that may be required.

101. A notice shall be posted in the hauling engine house and at each signalling station, containing the system of haulage signals in use at such engine house or signalling station.

102. The foregoing regulations 98 to 101 shall not come into operation until 1 July, 1914.

TELEPHONE. [SECTION 54.]

103. Where in any mine not being a small mine the distance of the main haulage from the shaft exceeds 1000 yards, efficient means of telephonic communication shall be provided and maintained between the end of the main haulage and the pit bottom and the surface.

This regulation shall not apply to mines of stratified ironstone in the Cleveland District, or to mines in any other district as respects which the Secretary of State is satisfied that similar conditions prevail.

BAROMETER AND HYGROMETER. [SECTION 71]

104. Every person on whom responsible duties are imposed with respect to the ventilation underground, and who is required to make a daily report in a book to be kept at the mine for the purpose shall, immediately before going into the mine and after coming out of the mine, read the barometer required to be placed near the entrance to the mine. This regulation shall not apply to mines of stratified ironstone in the Cleveland District or to mines in any other district as respects which the Secretary of State is satisfied that similar conditions prevail

105. Each hygrometer placed below ground in pursuance of the Act shall be read by a responsible official of the mine once every weekday if in the main intake airway and once

every week if in the main return airway. This regulation shall apply only to mines in which coal is worked.

SANITARY CONVENIENCES. [SECTION 76.]

106. A sufficient supply of suitable sanitary conveniences shall be provided —

- (a) On the surface, in or adjacent to the winding engine house, and at other suitable places convenient for the persons employed. Where females are employed on the surface, separate conveniences shall be provided for their use.
- (b) Below ground, at or near the pit bottom, and at suitable positions along the main roads. This provision shall not apply to a shaft in the course of being sunk.

107. Every sanitary convenience below ground shall have a portable receptacle constructed of metal, and provided with a metal cover.

108. A sufficient supply of disinfectant, or dry coal dust, or other suitable material for covering the feces shall be constantly provided in a suitable receptacle at every convenience below ground and at conveniences (other than water-closets) on the surface

109.—(a) Every sanitary convenience on the surface shall be under cover and so partitioned off as to secure privacy, and, if for the use of females, shall have a proper door and inside fastening.

(b) Where females are employed the conveniences for each sex shall be so placed or so screened that the interior shall not be visible, even when the door of any convenience is open, from any place where persons of the other sex have to work or pass, and if the conveniences for one sex adjoin those for the other sex the approaches shall be separate.

110 Every sanitary convenience shall be kept in a cleanly and sanitary condition, and in good repair, and the receptacles of all conveniences below ground shall be emptied and cleaned not less frequently than once in every seven days and oftener if necessary. The receptacles shall be emptied at the surface unless satisfactory arrangements are made for disposing of

the contents in the gob, goaf, or waste or for their destruction in a furnace.

III No person shall relieve his bowels on the surface or on any roadway below ground, except in one of the conveniences provided in accordance with the foregoing regulations.

II2. No person shall soil or render unfit for use in any way any convenience or sanitary utensil or appliance provided in accordance with these regulations, and every person relieving himself below ground shall cover the fæces with disinfectant or dry coal dust or other suitable material.

STORAGE AND USE OF CANDLES AND PARAFFIN WAX

II3 Candles and paraffin wax shall not be stored in the mine below ground, except in pursuance of a written exemption by the inspector of the division, which exemption may be at any time withdrawn.

Where candles are taken below ground in proper metal boxes, each of which contains not more than one pound weight of candles, and not more than one box for each man is taken below ground, the keeping of such boxes in the working places or at a district station during a working shift shall not be deemed to be storage within the meaning of this regulation.

II4 Where candles are stored in the mine below ground in pursuance of an exemption as aforesaid, the following conditions shall be observed :—

- (a) The quantity stored on any day shall not exceed the supply reasonably required for that day ;
- (b) Until required for use, they shall be kept in a box or boxes constructed of fireproof material and placed in a recess in the strata, which recess, if made in the coal, shall be lined with fireproof material. Each box shall be in the sole charge of a person specially appointed for the purpose in writing by the manager, and shall be kept securely locked. No person other than a person so appointed shall in any way interfere with any such box.

II5.—(a) All candles used in the mine below ground shall be placed in a metal holder, which shall be of such design

that when fixed to a prop the flame of the candle cannot set fire to the wood. This regulation shall not apply to candles :—

- (1) When being carried ,
- (2) When used under the direct supervision of the person using the same.

116. Candles looped or strung together shall in no circumstances be burned off below ground.

PART III

ELECTRICITY. [SECTION 60.]

The following regulations shall not apply in the case of any apparatus used above ground except such as may directly affect the safety of persons below ground.

117 It shall be the duty of the mine-owner, agent, and manager to comply with and enforce the following regulations, and it shall be the duty of all workmen and persons employed to conduct their work in accordance with the regulations.

118 "*Pressure*" means the difference of electrical potential between any two conductors, or between a conductor and earth as read by a hot wire or electro-static volt-meter.

"*Low Pressure*" means a pressure in a system normally not exceeding 250 volts where the electrical energy is used.

"*Medium Pressure*" means a pressure in a system normally above 250 volts, but not exceeding 650 volts, where the electrical energy is used.

"*High Pressure*" means a pressure in a system normally above 650 volts, but not exceeding 3000 volts, where the electrical energy is used or supplied.

"*Extra-high Pressure*" means a pressure in a system normally exceeding 3000 volts, where the electrical energy is used or supplied

"*System*" means an electrical system in which all the conductors and apparatus are electrically connected to a common source of electro-motive force.

"*Concentric System*" means a system in which the circuit

in a conductor or conductors, called the inner conductor, is completed through one or more conductors, called the outer conductor, arranged so that the inner conductor is insulated and the outer conductor is disposed over the insulation of, and more or less completely around, the inner conductor.

"*Conductor*" means an electrical conductor arranged to be electrically connected to a system.

"*Apparatus*" means electrical apparatus, and includes all apparatus, machines, and fittings in which conductors are used, or of which they form a part.

"*Circuit*" means an electrical circuit forming a system or branch of a system.

"*Covered with insulating material*" means adequately covered with insulating material of such quality and thickness that there is no danger.

"*Metallic covering*" means iron or steel armouring, with or without a lead or other metallic covering as the conditions of the case may require, or an iron or steel pipe surrounding two or more conductors.

"*Bare*" means not covered with insulating material.

"*Live*" means electrically charged.

"*Dead*" means at, or about, zero potential, and disconnected from any live system.

"*Open Sparking*" means sparking which owing to the lack of adequate provision for preventing the ignition of inflammable gas external to apparatus would ignite such inflammable gas.

"*Earthed*" means connected to the general mass of earth in such manner as will ensure at all times an immediate discharge of electrical energy without danger.

"*Earthing system*" means an electrical system in which all the conductors are earthed.

"*Switchgear*" means switches or fuses, conductors, and other apparatus in connection therewith, used for the purpose of controlling the current or pressure in any system or part of a system.

"*Authorized person*" means a person appointed in writing by the manager of the mine to carry out certain duties incidental to the generation, transformation, distribution, or use of electrical energy in the mine, such person being a person who is competent for the purposes of the rule in which the term is used.

"*Electrician*" means a person appointed in writing by the manager of the mine to supervise the apparatus in the mine and the working thereof, such person being a person who is over 21 years of age, and is competent for the purposes of the rule in which the term is used.

"*Danger*" means danger to health or danger to life or limb from shock, burn, or other injury to persons employed, or from fire or explosion attendant upon the generation, transformation, distribution, or use of electrical energy.

"*Use*" of electricity means the conversion of electricity into mechanical energy, heat, or light for the purpose of providing mechanical energy, heat, or light.

119. Notices shall be sent to the inspector of the division, on the forms prescribed by the Secretary of State, as follows, namely :—

- (i) Notice of the intention to introduce apparatus into any mine, or into any ventilating district in any mine.
- (ii) Notice of the intention to introduce or re-introduce electricity into any mine where the use of electricity has previously been prohibited by section 60 (1) of the Act
- (iii) On or before the twenty-first day of January in every year, an annual return giving the size and type of apparatus, and any particulars which may be required by the Secretary of State as to the circumstances of its use.

If the inspector of the division does not object in writing, within one calendar month from the receipt by him of the notice, to the carrying out of either of the intentions specified in the first or second notices, the owner shall be entitled to carry out such intention or intentions.

Provided that this regulation shall not apply to telephones and signalling apparatus.

120. A proper plan on the same scale as that kept at the mine in fulfilment of the requirements of the Act, shall be kept in the office at the mine showing the position of all fixed apparatus in the mine, other than cables, telephones, and signalling apparatus. The said plan shall be corrected as often as may be necessary to keep it reasonably up to date, and it shall be produced to an inspector of mines at any time on his request.

121. The following notices, constructed of durable material, shall be exhibited where necessary :—

- (i) A notice prohibiting any person other than an authorized person from handling or interfering with apparatus.
- (ii) A notice containing directions as to procedure in case of fire. This notice shall be exhibited in every place containing apparatus, other than cables, telephones, and signalling apparatus
- (iii) A notice containing directions as to the restoration of persons suffering from the effects of electric shock.
- (iv) A notice containing instructions how to communicate with the person appointed under regulation 128 (a). This notice shall be exhibited at the shaft bottom.

122.—(a) In all places lighted by electricity where a failure of the electric light would be likely to cause danger, one or more safety lamps or other proper lights shall be kept continuously burning.

(b) Efficient telephonic or other equivalent means of communication shall be provided for communicating between the place in which the switchgear provided under regulation 128 (a) is erected and the shaft bottom or main distributing centre in the pit

(c) Fire buckets of suitable capacity, filled with clean dry sand ready for immediate use in extinguishing fires, shall be kept in every place containing apparatus, other than cables, telephones, and signalling apparatus.

123.—(a) Where necessary to prevent danger or mechanical damage transformers and switchgear shall be placed in a separate room, compartment, or box.

(b) Unless the apparatus is so constructed, protected, and worked so as to obviate the risk of fire, no inflammable material shall be used in the construction of any room, compartment, or box containing apparatus, or in the construction of any of the fittings therein. Each such room, compartment, or box shall be substantially constructed and shall be kept dry.

(c) Adequate working space and means of access clear of obstruction and free from danger shall be provided for all apparatus that has to be worked or attended to by any

person, and all handles intended to be operated shall be conveniently placed for that purpose.

124.—(a) All apparatus and conductors shall be sufficient in size and power for the work they may be called upon to do, and so constructed, installed, protected, worked, and maintained as to prevent danger so far as is reasonably practicable.

(b) All insulating material shall be chosen with special regard to the circumstances of its proposed use. It shall be of mechanical strength sufficient for its purpose, and so far as is practicable, it shall be of such a character or so protected as fully to maintain its insulating properties under working conditions of temperature and moisture.

(c) Every part of a system shall be kept efficiently insulated from earth, except that (i) the neutral point of a polyphase system may be earthed at one point only; (ii) the mid-voltage point of any system, other than a concentric system, may be earthed at one point only; and (iii) the outer conductor of a concentric system shall be earthed. Where any point of a system is earthed it shall be earthed by connection to an earthing system at the surface of the mine.

(d) Efficient means shall be provided for indicating any defect in the insulation of a system.

125.—(a) All metallic sheaths, coverings, handles, joint-boxes, switchgear frames, instrument covers, switch and fuse covers and boxes, and all lampholders, unless efficiently protected by an earthed or insulated covering made of fire-resisting material, and the frames and bedplates of generators, transformers, and motors (including portable motors), shall be earthed by connection to an earthing system on the surface of the mine.

(b) Where the cables are provided with metallic covering constructed and installed in accordance with regulation 129 (e), such metallic covering may be used as a means of connection to the earthing system. All the conductors of an earthing system shall have a conductivity at all parts and at all joints at least equal to 50 per cent of that of the largest conductor used solely to supply the apparatus a part of which it is desired to earth. Provided that no conductor of an earthing system shall have a cross-sectional area of less than .022 of a square inch.

(c) All joints in earth conductors and all joints to the metallic covering of the cables shall be properly soldered or otherwise efficiently made, and every earth conductor shall be soldered into a lug for each of its terminal connections. No switch, fuse, or circuit breaker shall be placed in any earth conductor.

This rule shall not apply (except in the case of portable apparatus) to any system in which the pressure does not exceed low pressure direct current or 125 volts alternating current.

126.—(a) Where electricity is distributed at a pressure higher than medium pressure (i) it shall not be used without transformation to medium or low pressure except in fixed machines in which the high or extra-high pressure parts are stationary; and (ii) motors under 20 H.P. shall be supplied with current through a transformer stepping down to medium or low pressure.

(b) Where energy is transformed, suitable provision shall be made to guard against danger by reason of the lower pressure apparatus becoming accidentally charged above its normal pressure by leakage from or contact with the higher pressure apparatus.

127. Switchgear and all terminals, cable ends, cable-joints and connections of apparatus shall be constructed and installed so that—

- (i) All parts shall be of mechanical strength sufficient to resist rough usage.
- (ii) All conductors and contact areas shall be of ample current-carrying capacity and all joints in conductors shall be properly soldered or otherwise efficiently made.
- (iii) The lodgment of any matter likely to diminish the insulation, and of coal dust on or close to live parts, shall be prevented.
- (iv) All live parts shall be so protected or enclosed as to prevent accidental contact by persons and danger from arcs of short circuits, fire, or water.
- (v) Where there may be risk of igniting gas, coal dust, or other inflammable material, all parts shall be so protected as to prevent open sparking.

128.—(a) Properly constructed switchgear for cutting off the supply of current to the mine shall be provided at the surface of the mine, and during the time any cable is live a person authorized to operate the said switchgear shall be available within easy reach thereof.

Lightning arresters, properly adjusted and maintained, shall be provided where necessary to prevent danger.

(b) Efficient means, suitably placed, shall be provided for cutting off all pressure from every part of a system, as may be necessary to prevent danger.

(c) Such efficient means shall be provided for cutting off all pressure automatically from the part or parts of the system affected in the event of a fault, as may be necessary to prevent danger.

(d) Every motor shall be controlled by switchgear for starting and stopping, so arranged as to cut off all pressure from the motor and from all apparatus in connection therewith, and so placed as to be easily worked by the person appointed to work the motor.

(e) If a concentric system is used no switch, fuse, or circuit breaker shall be placed in the outer conductor, or in any conductor connected thereto, except that, if required, a reversing switch may be inserted in the outer conductor at the place where the current is being used. Nevertheless, switches, fuses, or circuit breakers may be used to break the connection with the generators or transformers supplying the electricity; provided that the connection of the outer conductor with the earthing system shall not thereby be broken.

129. All cables, other than flexible cables for portable apparatus and signalling wires, shall comply with the following requirements.—

(a) They shall be covered with insulating material (except that the outer conductor of a concentric system may be bare). The lead sheath of lead-sheathed cables and the iron or steel armouring of armoured cables shall be of not less thickness respectively than is recommended by the Engineering Standards Committee.¹

(b) They shall be efficiently protected from mechanical damage and supported at sufficiently frequent intervals and in

¹ Report No. 7, Revised March, 1920.

such a manner as adequately to prevent danger and damage to the cables.

(c) Concentric cables, or two-core or multi-core cables protected by a metallic covering, or single-core cables protected by a metallic covering which shall contain all the conductors of the circuit, shall be used (i) where the pressure exceeds low pressure; (ii) where the roadway conveying the cables is also used for mechanical haulage, and (iii) where there may be risk of igniting gas, coal dust, or other inflammable material.

Provided that if the medium pressure direct current system is used (i) two single-core cables protected by metallic coverings may be used for any circuit if the said metallic coverings are bonded together by earth conductors so placed that the distance between any two consecutive bonds is not greater than 100 feet measured along either cable, and (ii) two single-core cables covered with insulating material efficiently protected otherwise than by a metallic covering may be used in gate roads (except in gate roads which are also used for mechanical haulage, or where there may be risk of igniting gas, coal dust, or other inflammable material) for the purpose of supplying portable apparatus.

(d) Cables unprotected by a metallic covering shall be properly secured by some non-conducting and readily breakable material to efficient insulators.

(e) The metallic covering of every cable shall be (i) electrically continuous throughout; (ii) earthed, if it is required by regulation 125 (a) to be earthed, by a connection to the earthing system of not less conductivity than the same length of the said metallic covering, (iii) efficiently protected against corrosion where necessary, (iv) of a conductivity at all parts and at all joints at least equal to 50 per cent of the conductivity of the largest conductor enclosed by the said metallic covering, and (v) where there may be risk of igniting gas, coal dust, or other inflammable material, so constructed as to prevent as far as is practicable any fault or leakage of current from the live conductors from causing open sparking.

Provided that where two single-core cables protected by metallic coverings bonded together in accordance with paragraph (c) of this regulation are used for a circuit, the conductivity of each of the said metallic coverings at all parts

and at all joints shall be at least equal to 25 per cent of the conductivity of the conductor enclosed thereby.

(f) Cables and conductors, where joined up to motors, transformers, switchgear, and other apparatus, shall be installed so that (i) they are mechanically protected by securely attaching the metallic covering (if any) to the apparatus; and (ii) the insulating material at each cable end is efficiently sealed so as to prevent the diminution of its insulating properties. Where necessary to prevent abrasion or to secure gas-tightness there shall be properly constructed bushes.

130 —(a) Flexible cables for portable apparatus shall be two-core or multi-core and covered with insulating material which shall be efficiently protected from mechanical damage. If a flexible metallic covering be used either as the outer conductor of a concentric system or as a means of protection from mechanical damage the same shall not alone be used to form an earth conductor for the portable apparatus.

(b) Every flexible cable for portable apparatus shall be connected to the system and to the portable apparatus itself by a properly constructed connector.

(c) At every point where flexible cables are joined to main cables a switch capable of entirely cutting off the pressure from the flexible cables shall be provided.

(d) No lampholder shall be in metallic connection with the guard or other metal work of a portable lamp.

131 —(a) Every person appointed to work, supervise, examine, or adjust any apparatus shall be competent for the work that he is set to do. No person except an electrician or a competent person acting under his supervision shall undertake any work where technical knowledge or experience is required in order adequately to avoid danger.

(b) An electrician shall be appointed in writing by the manager to supervise the apparatus. If necessary for the proper fulfilment of the duties detailed in the succeeding paragraphs of this rule, the manager shall also appoint in writing an assistant or assistants to the electrician.

(c) The electrician shall be in daily attendance at the mine. He shall be responsible for the fulfilment of the following duties, which shall be carried out by him or by an assistant or assistants duly appointed under paragraph (b): (i) the

thorough examination of all apparatus (including the testing of earth conductors and metallic coverings for continuity) as often as may be necessary to prevent danger; and (ii) the examination and testing of all new apparatus, and of all apparatus re-erected in a new position in the mine before it is put into service in the new position.

Provided that in the absence of the electrician for more than one day the manager shall appoint in writing an efficient substitute.

(d) The electrician shall keep at the mine a log-book made up of daily log-sheets kept in the form prescribed by the Secretary of State. The said log-book shall be produced at any time to an inspector of mines on his request.

(e) Should there be a fault in any circuit the part affected shall be made dead without delay, and shall remain so until the fault has been remedied.

(f) All apparatus shall be kept clear of obstruction and free from dust, dirt, and moisture, as may be necessary to prevent danger.

Inflammable or explosive material shall not be stored in any room, compartment, or box containing apparatus, or in the vicinity of apparatus.

(g) Adequate precautions shall be taken by earthing or other suitable means to discharge electrically any conductor or apparatus, or any adjacent apparatus if there is danger therefrom, before it is handled, and to prevent any conductor or apparatus from being accidentally or inadvertently electrically charged when persons are working thereon. While lamps are being changed the pressure shall be cut off.

Provided that this paragraph shall not apply to the cleaning of commutators and slip rings working at low or medium pressures.

(h) The person authorized to work an electrically driven coal-cutter or other portable machine shall not leave the machine while it is working, and shall, before leaving the working place, ensure that the pressure is cut off from the flexible trailing cable which supplies such coal-cutter or other portable machine. Trailing cables shall not be dragged along by the machine when working.

(i) Every flexible cable shall be examined periodically (if used with a portable machine, at least once in each shift by

the person authorized to work the machine), and if found damaged or defective it shall forthwith be replaced by a spare cable in good and substantial repair. Such damaged or defective cable shall not be further used underground until after it has been sent to the surface and there properly repaired.

132. In any part of a mine in which inflammable gas, although not normally present, is likely to occur in quantity sufficient to be indicative of danger, the following additional requirements shall be observed.—

- (i) All cables, apparatus, signalling wires, and signalling instruments shall be constructed, installed, protected, worked, and maintained so that in the normal working thereof there shall be no risk of open sparking.
- (ii) All motors shall be constructed so that when any part is live all rubbing contacts (such as commutators and slip-rings) are so arranged or enclosed as to prevent open sparking.
- (iii) The pressure shall be switched off apparatus forthwith if open sparking occurs, and during the whole time that examination or adjustment disclosing parts liable to open sparking is being made. The pressure shall not be switched on again until the apparatus has been examined by the electrician or one of his duly appointed assistants and the defect (if any) has been remedied or the adjustment made.
- (iv) Every electric lamp shall be enclosed in an air-tight fitting, and the lamp globe itself shall be hermetically sealed.
- (v) A safety lamp shall be provided and used with each motor when working, and should any indication of fire-damp appear from such safety lamp, the person appointed to work the motor shall forthwith cut off the pressure therefrom and report the matter to a fireman, examiner, or deputy or other official.

133.—(a) Current from lighting or power circuits shall not be used for firing shots.

(b) Shot-firing cables shall be covered and protected as provided by regulation 130 (a) for flexible cables. Adequate

precautions shall be taken to prevent them from touching other cables and apparatus.

134.—(a) Where electricity is used for signalling the pressure in any one circuit shall not exceed 25 volts.

(b) Contact-makers shall be so constructed as to prevent the accidental closing of the circuit.

(c) Adequate precautions shall be taken to prevent signal and telephone wires from touching cables and other apparatus.

135.—(a) All relighting apparatus shall be so constructed, worked, and maintained as to preclude the accumulation of explosive gas within it.

(b) Relighting apparatus shall not be used in any part of a mine to which regulation 132 applies.

(c) All safety lamps when relighted shall be examined before being issued.

136.—(a) Haulage by electric locomotives on the overhead trolley wire system is prohibited in any mine in which coal is worked.

(b) Haulage by electric locomotives on the overhead trolley wire system may be used in mines other than coal mines, and haulage by storage battery locomotives may be used in any mine, with the consent in writing first obtained of the Secretary of State in all cases, and subject to such conditions affecting safety as may be prescribed by him.

137.—(a) Any of the requirements of this Part of these regulations shall not apply in any case in which exemption is obtained from the Secretary of State on the ground either of emergency or special circumstances, on such conditions as the Secretary of State may prescribe.

(b) The requirements of this Part of these regulations which relate to the construction of cables and other apparatus shall not, before the 1st day of January, 1920, apply to any apparatus which was in use before the 1st day of June, 1911, and which had been constructed or had before the 1st day of June, 1911, been adapted so as to comply with the requirements relating to the construction of electrical apparatus in mines in force before that date, unless the inspector of the division, by written notice served on the owner, agent, or manager as regards either all or any of the said requirements of the

foregoing rules so directs. If the owner, agent, or manager within 14 days after the receipt of such notice objects to comply with the requirements specified in the notice, the matter shall be settled in manner provided by the Act for settling disputes.

PART IV

RESCUE AND AMBULANCE. [SECTION 85]

(a) *Rescue*

138. The following regulations shall apply to all mines in which coal is worked, provided, however, that the Secretary of State may, if he thinks fit, exempt from the regulations any mine at which the total number of underground employees is less than 100 if the mine is so situated that in the opinion of the Secretary of State the organization of a central rescue station from which it could be served, is impracticable.

139. No person, unless authorized by the manager or official appointed by the manager for the purpose, or, in the absence of the manager or such official, by the principal official of the mine present at the surface, shall be allowed to enter a mine after an explosion of fire-damp or coal dust, or after the occurrence of a fire, for the purpose of engaging in rescue work.

140.—(a) There shall be organized and maintained at every mine, as soon as is reasonably practicable, competent rescue brigades on the following scale.—

Where the number of underground employees is 250 or less	1 brigade
Where the number of underground employees is more than 250 but not more than 700	2 brigades
Where the number of underground employees is more than 700 but not more than 1000	3 brigades
Where the number of underground employees is more than 1000 ..	4 brigades

But the owner, agent, or manager of a mine, at which the total number of underground employees is less than 100, shall

be deemed to have complied with this provision if he has acquired the privilege of calling for a brigade from a central rescue station. •

A group of mines belonging to the same owner, of which all the shafts or exits for the time being in use in working the mines lie within a circle having a radius of two miles shall, for the purpose of ascertaining the number of brigades required, be treated as one mine.

(b) A rescue brigade shall consist of not less than five persons employed at the mine, carefully selected on account of their knowledge of underground work, coolness, and powers of endurance, and certified to be medically fit, a majority of whom shall be trained in first aid and shall hold a certificate of the St. John Ambulance Association or the St. Andrew's Association or other Society or body approved by the Secretary of State.

(c) There shall be selected from the ranks of each rescue brigade one person or leader who shall act as captain of the brigade.

(d) A brigade shall not be deemed competent unless (i) it undergoes a course of training approved by the Secretary of State; (ii) after the preliminary course of training it undergoes in every quarter at least one day's practice with breathing apparatus which practice shall at least twice in the year take place at the mine, (iii) the members of the brigade shall have received instruction in the reading of mine plans, in the use and construction of breathing apparatus, in the properties and detection of poisonous or inflammable gases, and in the various appliances used in connection with mine rescue and recovery work.

(e) Arrangements shall be made at every mine for summoning members of rescue brigades immediately their services are required.¹

141. If it can clearly be proved that the necessary number of persons employed underground at a mine will not consent to form a brigade or brigades, or having offered their services fail to be trained or maintain their training, the owner, agent, or manager of the mine shall not be liable to any penalty

¹ By General Regulations dated 19 May, 1914, Nos. 140, 141, and 142 of these regulations do not apply to a mine served by a central rescue station. See *post*, p. 271. •

provided first that he has endeavoured to the best of his ability to constitute the requisite brigade or brigades, and has afforded every opportunity to the persons employed at the mine to undergo the necessary training, and secondly that he has made a *bona fide* attempt to arrange for the supply from a central rescue station of such rescue brigades as he is unable to provide at his mine.

142.—(a) There shall be provided and maintained at every mine suits of portable breathing apparatus in the proportion of two suits to each brigade required by regulation 140 (a). The apparatus must be capable of enabling the wearer to remain for at least one hour in an irrespirable atmosphere, and must be kept ready for immediate use. The apparatus must be housed in suitable receptacles in a dry and cool room.

The owner, agent, or manager of a mine shall be deemed to have complied with this requirement if he has acquired the privilege of calling for such of these appliances as he may not possess from a central rescue station, always provided that the central rescue station is situated within a radius of 10 miles from the mine and is in telephonic communication with the mine.

(b) There shall be kept at every mine tracings of the workings of the mine up to a date not more than three months previously, showing the ventilation and all principal doors, stoppings, and air-crossings, regulators and telephone stations, and distinguishing the intake air by a different colour from the return air, which tracings shall be in a suitable form for use by the brigades.

(c) There shall also be provided and maintained at every mine which maintains a rescue brigade or brigades—

- (i) Two or more small birds or mice for testing for carbon monoxide.
- (ii) Two electric hand-lamps for each brigade, ready for immediate use and capable of giving light for at least four hours.
- (iii) One oxygen reviving apparatus.
- (iv) A safety lamp for each member of the rescue brigades for testing for fire-damp.
- (v) An ambulance box provided by the St. John Ambu-

lance Association, or similar box, together with anti-septic solution and fresh drinking water.

143. There shall be kept and maintained in every central rescue station not less than 15 complete suits of breathing apparatus, with means of supplying sufficient oxygen or liquid air to enable such apparatus to be constantly used for two days, and of charging such apparatus ; and

20 electric hand-lamps ;

4 oxygen reviving apparatus ;

An ambulance box or boxes, provided by the St. John Ambulance Association, or similar boxes, together with antiseptic solution and fresh drinking water ,
Cages of birds.

A motor-car shall be kept in constant readiness.

144. Every central rescue station shall be placed under the immediate control of a competent person conversant with the use of the appliances.

145. There shall be adopted at every mine by the owner, agent, or manager such rules for the conduct and guidance of persons employed in rescue work in or about the mine as may appear best calculated for the carrying out of rescue operations, and the rescue brigade or brigades, if any, maintained at the mine shall be thoroughly instructed in such rules.

146. " Central rescue station " means a station established to serve several collieries.

(b) *Ambulance*

147. In every mine there shall be provided and kept in good condition and ready for immediate use at a convenient spot in the district of each fireman, examiner, or deputy, and also in the office at the mine or other convenient place on the surface :—

(a) A suitably constructed stretcher.

(b) A box containing a sufficient supply of suitable splints and bandages, adhesive plaster, boric vaseline, cotton-wool, and tincture of iodine or other suitable antiseptic solution, •

Adjoining districts may for the purpose of this regulation be treated as one district, if the total number of persons employed in those districts at any one time does not exceed 50.

The foregoing requirements shall not apply to any mine, seam, or district the conditions of which are so damp as to make it impossible to keep the appliances aforesaid in a good state.

In case of dispute between the manager and the workmen as to the possibility of keeping ambulance appliances in a good state, the matter shall be referred to the inspector of the division, who shall have power to decide the dispute.

The manager or other qualified official appointed by him shall personally inspect the appliances so provided, at least once in every month, and satisfy himself that they are in conformity with the above requirements.

148. In every mine, not being a small mine, the manager shall arrange, if possible, that there shall be at least one man trained in first aid and holding a certificate of the St. John Ambulance Association, the St. Andrew's Association, or other Society or body approved by the Secretary of State, in the district of each fireman, examiner, or deputy at any time when twenty persons or more are being employed in the district. If less than twenty persons are employed in each district the manager shall arrange if possible that there shall be below ground during each shift at least one man so trained and having the certificate as aforesaid. This regulation shall not come into force until 1st April, 1914.

149. There shall be provided and kept in good condition at every mine a suitably constructed ambulance carriage. This requirement shall not apply :—

- (a) To any mine at which the total number of employees is less than 100 if the mine is so situated that in the opinion of the Secretary of State it cannot be served from a central rescue station, hospital, or other place, or by an arrangement with other mines for the joint provision of a carriage as hereinafter provided and if the mine is exempted by the Secretary of State.
- (b) To any mine at which the total number of employees is less than 500, if the owner, agent, or manager has acquired the privilege of obtaining the use of such a

conveyance when required from a central rescue station, hospital, or other place, distant not more than ten miles from the mine, and in telephonic communication with the mine

- (c) To any mine at which the total number of employees is 500 or more, if the owner, agent, or manager has acquired the privilege of obtaining the use of a suitably constructed motor ambulance carriage when required from a central rescue station, hospital, or other place distant not more than 10 miles from the mine, and in telephonic communication with the mine and the inspector of the division is satisfied that the arrangements are such as to ensure the prompt attendance of the carriage at the mine.

A group of mines belonging to the same owner or to owners who have entered into an arrangement for the joint provision of an ambulance carriage shall for the purpose of this regulation be treated as one mine, if all the shafts or exits for the time being in use in working the mines lie within a circle having a radius of not more than two miles, or where a motor ambulance carriage is provided in constant readiness and facilities exist at each mine for summoning the carriage by telephone, five miles.

PART V

SURFACE LINES AND SIDINGS

The following regulations shall apply to lines of rails of not less than 4 feet 8½ inches gauge and sidings, including lines or sidings to which section III of the Act applies, and the use of locomotives and wagons thereon :—

150. Point rods and signal wires in such a position as to be a source of danger to persons employed shall be sufficiently covered or otherwise guarded.

151. Ground levers working points shall be so placed that men working them are clear of adjacent lines, and shall be placed in a position parallel to the adjacent lines, or in such other position and be of such form as to cause as little obstruction as possible to persons employed.

This rule shall only apply to sidings constructed after 10 June, 1911. •

152. Lines of rails and points shall be periodically examined and kept in efficient order, having regard to the nature of the traffic.

153. Coupling poles or other suitable mechanical appliances shall be provided where required, and shall be used in every case for coupling and uncoupling locomotives or wagons in motion wherever it is reasonably practicable

154. Pointed wood sprags, not exceeding three feet in length, and scotches, when required, shall be provided for the use of persons in charge of the movement of wagons, and shall be used as and when required.

155. No person, except those in charge of the wagons, shall pass immediately in front of or between wagons moving under the screens.

156. Where during the period between one hour after sunset and one hour before sunrise, or in foggy weather, shunting or any operations likely to cause danger to persons employed are frequently carried on, efficient lighting shall be provided either by hand-lamps or stationary lights, as the case may require, at all points where necessary for the safety of such persons.

157. When materials are placed within three feet of a line of rails and persons employed are exposed to risk of injury from traffic by having to pass on foot over them or between them and the line, such material shall, as far as reasonably practicable, be so placed as not to endanger such persons, and there shall be adequate recesses at intervals of not more than twenty yards where the materials exceed that length.

This rule shall not apply to stocking grounds.

158. No person shall cross a line of rails by crawling or passing underneath a train or wagons thereon where there may be risk of danger from traffic.

159. Wagons shall not be moved or allowed to be moved on a line of rails by means of a prop or pole when other reasonably practicable means may be adopted. Props used for the above purpose shall be made of iron, steel, or strong timber hooped with iron to prevent splitting, and ropes or chains used for towing shall be of a suitable nature and sufficient strength.

160. Wherever railway wagons are specially placed so as to afford a thoroughfare, such thoroughfare shall be at least five yards in length.

161. Where a locomotive pushes more than one wagon and risk of injury may thereby be caused to persons employed, a man shall, wherever it is safe and reasonably practicable, accompany or precede the front wagon, or other efficient means shall be taken to obviate such risk.

162 —(a) No person shall be upon the buffer of a locomotive or wagon in motion unless there is a secure handhold, and shall not stand thereon unless there is also a secure footplace ;
(b) no person shall ride on a locomotive or wagon by means of a coupling pole or other like appliance.

(Paragraph (a) of this rule shall not come into operation until 10 June, 1916)

163. No locomotive or wagon shall be moved on a line of rails until warning has been given by the person in charge to persons employed whose safety is likely to be endangered.

164 Where persons employed have to pass on foot or work, no locomotive or wagon shall be moved on a line of rails during the period between one hour after sunset and one hour before sunrise, or in foggy weather, unless the approaching end, wherever it is safe and reasonably practicable, is distinguished by a suitable light or accompanied by a man with a lamp.

Provided that this regulation shall not apply to the movement of locomotives or wagons within any area which is efficiently lighted by stationary lights.

165. Any person who has been holding a pair of points must see that they drop back into their proper position before leaving them, and in case of throw-over point levers he must see that the lever is thrown back into its proper position before leaving it.

166. Where wagons are used on self-acting inclined planes efficient stop-blocks shall be provided at the top of the inclines, and runaway switches shall be fixed in such positions as to prevent danger, and no wagon shall be left on a self-acting incline without being properly secured

167. The driver in charge of a locomotive or a man preceding it on foot shall give an efficient sound signal as a

warning on approaching any level-crossing over a line of rails regularly used by persons employed, or any curve where sight is intercepted, or any other point of danger to persons employed.

168. A danger signal shall be exhibited at or near the ends of any wagon or train of wagons undergoing repair wherever persons employed are liable to be endangered by an approaching locomotive or wagon

169 No person under the age of 18 shall be employed as a locomotive driver, and no person under the age of 16 shall be employed as a shunter.

170. All glass tubes of water gauges on locomotives or stationary boilers used for the movement of wagons shall be adequately protected by a covering or guard

171. No person shall move or attempt to move a wagon by pushing at the buffer

PART VI

ADDITIONAL REGULATIONS FOR SINKING

For the purpose of the regulations, kibble includes kettle, hoppit, tub, bowk, barrel, or cage

172 In addition to the daily examination required by section 66 of the Act, the master-sinker, or a competent person appointed for the purpose by the manager, shall once at least in every twenty-four hours examine thoroughly the state of the shaft and the state of all gear by which cradles, platforms, or pumps are slung in the shaft or by which persons or material are raised or lowered

173 —(a) The manager shall fix by a notice which shall be kept posted at the top of the shaft in a prominent position the number of persons who may ride in the kibble at one time, and the banksman or chargeman as the case may be shall not allow any person to ride in excess of that number

(b) No person shall ride on or against a full kibble or on the edge of a kibble

174 No engine worked by mechanical power other than a fixed engine shall be used for lowering and raising persons and material in the shaft.

175. Every cradle or platform used in the shaft shall be constructed with a grid or other suitable contrivance, when necessary to secure the efficient ventilation of the whole of the shaft.

176 Every cradle or platform on which men work in the shaft shall be so protected as to prevent anyone falling off

177. While men are at work on any cradle or platform in the shaft the following precautions shall be strictly observed:—

- (a) The cradle or platform shall be secured to the sides of the shaft in order to prevent its swinging.
- (b) The flap over the kibble hole shall be securely fastened.
- (c) If the cradle or platform is constructed of two or more pieces hinged, the pieces shall be securely bolted together
- (d) The cradle or platform shall not be moved except by the express direction of the manager, master-sinker or chargeman

178 If work is carried on during the night the surface at the shaft top shall be efficiently lighted.

179 The competent person appointed under section 14 of the Act shall during his shift have entire charge of the operations in the shaft bottom, subject, however, to the directions of the master-sinker or of the manager of the mine, and is hereinafter referred to as the chargeman.

180 The examination required to be made by the charginan before the commencement of work shall be made immediately before the descent of the shift.

181. The chargeman shall as part of his examination before the commencement of work, or if work is carried on without any interval by a succession of shifts, then as part of his examinations during his shift, examine carefully the sides of the shaft, take off any loose stones, and otherwise satisfy himself that the shaft is in a safe condition for men to work at the bottom. When men are engaged in walling or tubbing the shaft a similar examination shall be made by a competent person appointed by the manager

182 The chargeman shall be the last man to ride at the end of the shift, and, if his shift is succeeded immediately

by another shift, he shall not leave the bottom of the shaft until after the descent of the chargeman of the next shift.

183. When stone, coal, or debris or gear, tools, or materials are being sent to the surface the chargeman shall see—

- (a) that the kibble is properly loaded ;
- (b) that no stones, coal, or debris are packed above the level of the top of the kibble ,
- (c) that gear, tools, or materials are put into an empty kibble, and, if they project above the level of the top of the kibble, are securely fastened to the bow or chains of the kibble before the kibble is sent away ;
- (d) that the kibble before being sent away from the bottom is put into line with the pulleys and carefully steadied, and that the bottom and sides are free from adhering stones and dirt.

184. No person shall be allowed to descend after any cessation of work in the shaft caused by the withdrawal of the workmen for shot-firing or other purposes until the chargeman, accompanied if necessary by not more than two other persons, has descended and examined the shaft and found it to be safe in all respects. If inflammable gas has been found or is likely to be found in the shaft the examination shall be made with a locked safety lamp of a type which will indicate the presence of such gas.

185. The winding engineman shall not work the winding engine when men are in the shaft except in pursuance of a signal received from the banksman or chargeman.

186. When lowering the kibble the winding engineman shall stop it when it has reached a point three fathoms above the bottom of the shaft or above any cradle or platform upon which the kibble is to alight and shall wait the signal from the chargeman to let it down. When raising the kibble he shall stop the engine as soon as the kibble has been raised four feet from the bottom, in order that the chargeman may see that the rope is steadied, and shall not again move his engine until he has received the signal from the banksman or chargeman.

187. When gear, tools, or materials are being lowered the banksman shall see (a) that the kibble is properly loaded,

(b) that no loose material is packed above the level of the top of the kibble, and (c) that gear or tools are put into an empty kibble, and if they project above the level of the top are securely fastened to the bow or chains of the kibble, and (d) that timber and other bulky articles are safely slung.

188. The banksman shall at all times keep the shaft top and landing edge free from loose material.

189. The following signals shall be used :—

To raise up	1
To lower down •	2
To stop when in motion	1
When men are to ride a preliminary signal of ..	3

The manager shall fix such other signals as may be required.

This regulation shall not apply to any shaft in course of being sunk at the date of this regulation coming into force.

190. No person other than the banksman or chargeman shall give any signal unless he is an official of the mine or is authorized in writing by the manager to give signals.

PART VII

REPEAL

All special rules in force at any mine under any Act repealed by the Coal Mines Act, 1911, at the time when these regulations come into force are hereby revoked, but the revocation shall not affect any penalty incurred in respect of an offence committed against any such special rule or any legal proceedings or remedy in respect of any such penalty and any such legal proceedings may be instituted or continued and any such penalty may be imposed as if the special rule had not been revoked

R McKenna,
One of His Majesty's Principal
Secretaries of State.

Home Office, Whitehall,
10th July, 1913

No. 341

GENERAL REGULATIONS, DATED APRIL 1, 1913, MADE BY THE SECRETARY OF STATE UNDER SECTIONS 57 AND 86 OF THE COAL MINES ACT, 1911 (1 & 2 GEO. V, C. 50), AS TO THE HOURS OF EMPLOYMENT OF WINDING ENGINEMEN: AND ORDER OF THE SECRETARY OF STATE DATED 1 APRIL, 1913, PRESCRIBING THE DATE AFTER WHICH UNDER SECTION 57 (3) OF THE ACT A WINDING ENGINEMAN MAY NOT BE EMPLOYED FOR MORE THAN 8 HOURS IN ANY ONE DAY, EXCEPT AS PROVIDED BY THE GENERAL REGULATIONS.

In pursuance of sections 57 and 86 of the Coal Mines Act, 1911, I hereby make the following regulations, and direct that they shall apply to all mines to which that Act applies.

1. A winding engineman may be employed for more than eight hours in any one day in the circumstances hereinafter mentioned, but subject to the conditions contained in these regulations.

2. Where winding is carried on at a shaft by a succession of shifts a winding engineman may, for the purpose of changing shifts, be employed on one day in the week for a period not exceeding sixteen hours, or for two shifts of eight hours each, provided that in either case —

- (i) an interval of not less than eight hours elapses between the termination of his employment in one shift and the commencement of his employment in the next ;
- (ii) the period of employment does not, on the average of any three consecutive weeks, exceed eight hours per working day.

3. Where winding is carried on at a shaft by a succession of shifts and when on any day the employer is unavoidably prevented from obtaining the services of one of the enginemen by reason of the illness of or of accident to such engineman, or other cause, a winding engineman may be employed for not more than twelve hours on that day, or may be employed on a system of eight-hour shifts with an interval of

eight hours between each shift, provided that he shall not be so employed for more than six weeks consecutively in respect of the absence of such engineman.

4. Where winding is carried on at a shaft by a succession of shifts, but the work during some period or periods of the day is much heavier than the work during other periods, and it is desirable in the interests of safety that the winding engineman employed during the period or periods of heavier work shall not be employed for so long a time as eight hours, then if such winding engineman is employed for any less time than eight hours during the day, a winding engineman employed during the other part of the day may be employed for a corresponding time in excess of the eight hours, but not exceeding ten hours in all.

5. Where winding is carried on at a shaft by a succession of shifts, and the winding enginemen employed at that shaft have agreed, with the consent of the manager, to be absent in turn from the end of their shift on Saturday to the commencement of their shift on Monday, each of the winding enginemen may be employed for not more than sixteen hours both on Saturday and on Sunday in not more than two weeks in any three, or for alternate shifts of sixteen hours and twelve hours and twelve hours, or on a system of eight-hour shifts, provided that in any case an interval of not less than eight hours elapses between the termination of the employment in one shift and the commencement of employment in the next, and provided that notice of this arrangement is affixed by the manager in the winding engine house.

,6—(a) Where at any shaft one shift only of persons descends and ascends the shaft during the day, and mineral is not wound before the descent or after the ascent of that shift, a winding engineman may be employed for not more than ten and a half hours on any day at that shaft

(b) In any mine where only two shifts of workmen are employed below ground during a day, the one a mineral-getting shift and the other a repairing shift, and mineral is not wound or got except during the hours of the mineral-getting shift, and the total output of any such mine does not exceed on the average one hundred tons of mineral per working

day, a winding engineman may be employed for a period not exceeding nine hours.

(c) Where at times when no shift of men is at work in the mine it is necessary for some person or persons to descend the mine, and a person not otherwise employed to work a winding engine is employed to lower and raise such person or persons, the person so employed may be employed for more than eight hours but not for more than twelve hours in any day.

7. In the event of any accident to the winding machinery or other accident interfering with the lowering or raising of workmen, or in the event of any emergency requiring the continuous attendance of a winding engineman at the engine in the interests of the safety of the men or animals in or about the mine, a winding engineman may continue to be employed after the end of his shift unless and until another winding engineman regularly employed at the same shaft is available to take his place.

8. The manager shall specify in a notice, which shall be kept constantly posted up in the engine room, the hours of employment of the winding engineman at a shaft, or, if the winding is carried on at that shaft in more than one shift during the day, the hours of employment of the winding engineman of each shift.

If a winding engineman is employed for more than eight hours in any one day in pursuance of any of the exemptions in these regulations other than regulations 3 and 7 the notice shall also state under which exemption or exemptions the extended period of employment is claimed.

9.—(a) The manager shall cause a register to be kept in the engine room in the prescribed form, and it shall be the duty of the winding engineman on each day on which he is employed to enter in the book the hour at which he commenced his employment and the hour at which he terminated his employment on that day, or where he is employed in more than one shift on the same day the hour of commencement and termination of each shift. The register shall be examined each day by the official, if any, superior to the winding engineman, having the general charge of the machinery, or, if there is no such official, by the manager or under-manager, and shall be initialled by him.

(b) Where a winding engineman is employed in pursuance of the exemption contained in regulation 3 or regulation 7, full particulars of the case shall be entered in the register.

R. McKenna,
One of His Majesty's Principal
Secretaries of State.

Whitehall,
1st April, 1913.

In pursuance of section 57 (3) of the Coal Mines Act, 1911, I hereby prescribe that the date after which under the said section a winding engineman may not be employed for more than eight hours in any one day, except as provided by the general regulations made under the Act, shall be 30 June, 1913.

R. McKenna,
One of His Majesty's Principal
Secretaries of State.

Whitehall,
1st April, 1913.

No. 955

REGULATIONS, DATED SEPTEMBER 4, 1913, MADE BY THE SECRETARY OF STATE UNDER SECTION 77 (3) OF THE COAL MINES ACT, 1911 (1 & 2 GEO V, c 50), AS TO PROCEDURE AND COSTS OF REFERENCES IN REGARD TO THE COST OF MAINTENANCE OF WASHING AND DRYING ACCOMMODATION AND FACILITIES.

In pursuance of the powers conferred on me by subsection 3 of section 77 of the Coal Mines Act, 1911, I hereby make the following regulations as to procedure and costs of references under the said subsection.—

1 If, on receipt of a representation in pursuance of subsection 1 of the said section, the owner of the mine estimates that the total cost of maintenance of the accommodation and facilities required by the section and general regulations made thereunder will exceed threepence per week for each workman liable to contribute, he shall within 40 days from the receipt of the representation post a notice to that effect

at the pithead together with a copy of the estimates prepared or obtained by him, or a statement of the particulars on which his estimate is based, and unless the representation is withdrawn by a majority, ascertained by ballot, of the workmen employed in the mine to whom the section applies, the question of the estimated total cost of maintenance shall be referred to an arbitrator in pursuance of subsection 3

2. If the representation is not withdrawn within 20 days, and if no arbitrator is appointed by agreement between the parties within 30 days of the date on which the aforesaid notice is posted at the pithead, the owner shall make application in writing to the Judge of County Courts for the district, or in Scotland to the Sheriff of the County, to appoint an arbitrator, and shall forward to him a copy of the notice aforesaid.

3. The arbitrator when appointed shall at once serve notice on the owner of the time and place fixed by him for the hearing of the reference, and the owner shall at once cause a copy of the notice to be posted at the pithead

4. The time fixed by the arbitrator for the hearing shall be not less than seven days and not more than twenty-one from the time of his appointment, and the place shall be at the mine, unless the parties otherwise agree.

5. The owner may appear personally or by any agent. The workmen employed in the mine to whom the section applies may appoint any person to represent them at the hearing.

6. At least three days before the hearing of the reference the owner shall furnish the arbitrator and the person appointed by the workmen to represent them at the hearing with copies of the estimates prepared or obtained by him, and if any estimates have been prepared or obtained by the workmen, copies shall at least three days before the hearing be furnished to the arbitrator and owner.

7. The arbitrator may examine any persons tendered by the parties as witnesses, and may make such inspection of the mine as he may deem necessary.

Subject to the provisions of these regulations the proceedings at the hearing shall be such as the arbitrator may in his discretion direct.

8. The arbitrator shall communicate his decision in writing to both parties as soon as possible after the hearing.

9. The remuneration of the arbitrator, if he was appointed by agreement between the parties, shall be such sum as may have been agreed upon between the arbitrator and the parties, or, if he was appointed by the Judge or Sheriff, shall be a sum of five guineas together with any expenses necessarily incurred for travelling, or in a case of exceptional difficulty such special fee not exceeding ten guineas as may be fixed by the Judge or Sheriff. The remuneration of the arbitrator shall be payable by the owner unless the arbitrator is of opinion that the men have acted unreasonably in carrying the matter to arbitration and directs that the whole or any part thereof shall be paid by the men.

R. McKenna,
One of His Majesty's Principal
Secretaries of State.

Home Office, Whitehall,
4th September, 1913

No. 950

GENERAL REGULATIONS DATED AUGUST 29, 1913, MADE BY THE SECRETARY OF STATE UNDER SECTIONS 77 (2) AND 86 OF THE COAL MINES ACT, 1911 (1 & 2 GEO. V, c. 50), DETERMINING WHAT ARE SUFFICIENT AND SUITABLE ACCOMMODATION AND FACILITIES FOR TAKING BATHS AND DRYING CLOTHES. AND AS TO THE CONSTITUTION, POWERS, AND DUTIES OF COMMITTEE OF MANAGEMENT UNDER SECTIONS 77 (5) AND 86.—

In pursuance of sections 77 and 86 of the Coal Mines Act, 1911, I hereby make the following regulations and direct that they shall apply to all mines to which that Act applies and in which accommodation and facilities for taking baths and drying clothes are required under section 77 to be provided.

BATHING ACCOMMODATION AND FACILITIES

1 The accommodation and facilities for taking baths shall be provided in a building of sufficient dimensions, efficiently

lighted and ventilated, kept in good repair, and while the accommodation is in use heated to a temperature of not less than 60 nor more than 75 degrees Fahrenheit

2. The accommodation shall consist of spray or douche baths supplied with water at a temperature as near as may be of 100 degrees Fahrenheit, and each bath shall be contained in a cabinet constructed so as to secure privacy and having suitable arrangements for dressing and undressing.

3. The number of baths shall be in the proportion of one to every six persons in the largest shift employed at the mine.

4. The building shall be constructed of non-inflammable material and shall have a floor of cement or similar material so graded and drained as to allow any water to run to and be carried away at the sides of the building.

The building shall also be so constructed as to permit of its being easily cleaned and to prevent accumulations of dirt in any part, and for this purpose—

- (a) all corners and ledges shall be rounded and all inner surfaces of the building shall be smooth,
- (b) a space of not less than $1\frac{1}{2}$ inches shall be left between the walls of each cabinet and the sides of the building, and a space of not less than 10 inches between the walls of the cabinet and the floor of the building;
- (c) the inside wall of the building shall be constructed, to a height of not less than 7 feet from the floor, of impervious material which is capable of being readily cleaned,
- (d) wood shall not be used for the purpose of any inside fittings except seats and doors leading to the outside,
- (e) the surface of every seat shall be of hard wood and shall be made in two or more parts, with spaces between the parts of not less than $\frac{3}{4}$ inch.

5. No water shall be used for the baths which is liable to cause injury to health or to yield effluvia, and for the purpose of this regulation any water which absorbs from acid solution of permanganate of potash in four hours at 60 degrees Fahrenheit more than 0.5 grams of oxygen per gallon of water shall be deemed to be liable to cause injury to health.

6. The floor of the building, the cabinets and the inside

wall up to height of not less than seven feet shall be thoroughly cleansed once every day and the whole building shall be thoroughly cleansed at such fixed times as shall be decided by the Committee of Management, but at least once in every ten days. If the accommodation is used by more than one shift of persons during the day, the cabinets shall be cleansed at such intervals during the day as shall be decided by the Committee.

7. Every person using the accommodation shall be provided with soap, and, at the beginning of each week and at such other times as the person in charge of the baths may think necessary, with a clean towel for his sole use.

DRYING ACCOMMODATION AND FACILITIES

8. Arrangements shall be made for suspending in the roof of the building the clothes of each person using the accommodation, by means of a chain, or a cord so treated as to be impervious to moisture, which shall be so arranged and fitted as to be under the sole control of the person to whom it is allotted and to keep the clothes of such person when suspended entirely separate from the clothes of any other person, and efficient means shall be provided for drying clothes when so suspended

CONSTITUTION, POWERS, AND DUTIES OF COMMITTEE OF MANAGEMENT

9 The Committee of Management shall consist of three persons appointed by the owner of the mine and three persons elected by ballot by the workmen at the mine who are liable to contribute to the cost of maintenance of the bathing and drying accommodation and shall continue in office for the term of one year. In the case of death or resignation of any member, the vacancy shall be filled by the party which appointed such member, and the new member shall continue in office until the expiration of the term of office of his predecessor. Provided that where there are several mines belonging to the same owner of which all the shafts or exits for the time being in use in working the mines lie within a circle having a radius of five miles and baths are installed at two or more of the mines, a Joint Committee may

be appointed to manage the bathing and drying accommodation and facilities at all the mines at which such accommodation and facilities are provided. Each such mine shall be represented on the Joint Committee by two persons appointed by the owner and by two persons elected by ballot by the workmen at the mine who are liable to contribute

10 The procedure of the Committee shall be in accordance with rules made by the Committee, and minutes of all proceedings shall be kept. In the event of the Committee being equally divided on any question and not being able to come to an agreement, the question shall be referred to some person selected jointly by the representatives of the owner and of the workmen, whose decision shall be final.

11. The Committee shall be responsible for the maintenance of the building and fittings in good condition and repair and clean and fit for use, for the maintenance of due order and discipline in the use of the accommodation and facilities provided, for the provision of all supplies, for the efficient working of the arrangements and for the appointment and supervision of attendants.

12. The Committee shall have power (i) to undertake any structural or other work necessary to the discharge of their duties as aforesaid, (ii) to appoint attendants, and (iii) to make rules as to the cleansing of the building and fittings, the maintenance of discipline and orderly behaviour among persons using the accommodation, the order in which men are to take their baths, the times for bathing, the prevention of any nuisance by persons using the accommodation or otherwise, and the prohibition of any person using the accommodation who fails to comply with the rules made by the Committee or with any directions given by the attendant in charge of the building in pursuance of such rules, or who is suffering from an infectious or contagious disease, or is liable to communicate infection, or for other sufficient reason. The Committee shall forward a copy of any rules made by them to the inspector in charge of the division.

13. The Committee shall appoint a sufficient number of attendants one of whom shall be in charge, under the general control of the Committee, of the accommodation and facilities provided, and shall be responsible to the Committee for

enforcing the rules made by the Committee. The attendant in charge shall have power to exclude from the building any person refusing to comply with the rules of the Committee or any direction given by him in pursuance of those rules, and he shall immediately report the case to the Committee

14 The owner shall pay over to the Committee on each pay day the sums deducted by him, in pursuance of subsection 4 of section 77, from the wages of the workmen liable to contribute, and shall also pay over to the Committee at such times as may be agreed the amount which the owner is liable to contribute less interest at a rate not exceeding five per cent per annum on capital expenditure. Proper accounts shall be kept by the Committee of all income and expenditure, and a balance sheet shall be made out annually and shall be placed in the building in a conspicuous place where it can be read by all persons liable to contribute

R McKenna,
One of His Majesty's Principal
Secretaries of State.

Whitehall,
29th August, 1913.

No 710.

GENERAL REGULATIONS DATED 19 MAY, 1914, MADE BY THE
SECRETARY OF STATE UNDER SECTIONS 85 AND 86 OF THE
COAL MINES ACT, 1911 (1 & 2 GEO. V, C. 50) AMENDING
THE GENERAL REGULATIONS DATED JULY 10, 1913

In pursuance of sections 85 and 86 of the Coal Mines Act, 1911, I hereby make the following regulations amending the General Regulations made under the said Act and dated July 10, 1913:—

SPECIAL PROVISIONS FOR MINES SERVED BY A CENTRAL
RESCUE CORPS.

1. Nos 140, 141, and 142 of the General Regulations above-mentioned shall not apply to any mine which is served by a central rescue station maintaining a permanent rescue corps and which is situated within a radius of 10 miles from the station and is in telephonic communication with it, subject to the following conditions:—

(a) The rescue corps at the central station shall consist of not less than six men, or if the total number of underground

employees at all the mines served by the station in pursuance of this regulation exceeds 15,000, eight men.

The members of the corps shall be carefully selected on the ground of their coolness, powers of endurance, and general suitability for the work, and shall be medically certified to be fit for the work, and they shall hold a certificate of proficiency in first aid from a society or body approved by the Secretary of State.

They shall be continuously employed and in constant residence at the station

The corps shall be thoroughly trained in the use of breathing apparatus and in rescue work in accordance with a scheme approved by the Secretary of State and shall be constantly kept in a highly efficient state.

One or more members shall be appointed to act as leaders.

(b) One or more persons employed at the mine for the time being shall be selected for the purpose of acting with the rescue corps from the central station when summoned, as follows :—

If the total number of under-ground employees is not less than 100 nor more than 250	Not less than 1 person
If the total number of under-ground employees is more than 250, but not more than 1000	.. .. . Not less than 3 persons.
If the total number of under-ground employees is more than 1000	.. .. . Not less than 5 persons.

They shall be thoroughly trained, and shall from time to time undergo practices, at the central station, in the use of breathing apparatus and in rescue work in accordance with a scheme approved by the Secretary of State.

They shall be carefully selected on account of their knowledge of the mine, coolness, and powers of endurance, and shall be medically certified to be fit for the work and shall hold a certificate of proficiency in first aid as above-mentioned.

Subject to the limit of number specified above, so far as reasonably practicable at least one shall be selected from each shift.

Arrangements shall be made for summoning such persons immediately their services are required.

No breach of condition (b) shall be deemed to have arisen in consequence of failure to maintain at the mine the full number of trained men in accordance with the foregoing provisions if the owner, agent, or manager of the mine satisfies the Inspector of the Division that he had made every effort to comply with those provisions and that the failure was due to causes over which he had no control.

(c) There shall be kept at every mine tracings of the workings of the mine up to a date not more than three months previously, showing the ventilation and all principal doors, stoppings and air-crossings, regulators, and telephone stations, and distinguishing the intake air by a different colour from the return air, which tracings shall be in a suitable form for use by the corps.

(d) There shall be provided and maintained at the mine :—

- (i) Two complete suits of breathing apparatus or two smoke helmets (that is, appliances for supplying fresh air to the user by means of a pipe and bellows) or one of each in an efficient state and constantly ready for immediate use.
- (ii) Two or more small birds or mice for testing for carbon monoxide.
- (iii) One electric hand-lamp and one safety lamp for testing for fire-damp for each person trained in pursuance of condition (b) above
- (iv) One oxygen reviving apparatus.

DEFINITION OF "BREATHING APPARATUS"

2. For the purpose of the foregoing regulation and of Part IV of the General Regulations above-mentioned, breathing apparatus means an apparatus of such a character that the wearer carries with him all the means for respiration in an irrespirable atmosphere, and is not dependent for them, while in such an atmosphere, on any other person or persons.

R. McKenna,

One of His Majesty's Principal
Secretaries of State.

Whitehall,

19th May, 1914.

EXPLOSIVES

STATUTORY RULES AND ORDERS, 1913

Nos 953 and 1217 and No. 1914

MINES

COAL MINES ACT

THE EXPLOSIVES IN COAL MINES ORDER OF THE 1ST SEPTEMBER, 1913, REGULATING THE SUPPLY, USE, AND STORAGE OF EXPLOSIVES, THE EXPLOSIVES IN COAL MINES ORDER OF THE 25TH NOVEMBER, 1913, AND THE EXPLOSIVES IN COAL MINES ORDER OF THE 7TH APRIL, 1914.

In pursuance of the power conferred on me by section 61 of the Coal Mines Act, 1911, I hereby make the following Order.—

PART I

GENERAL PROVISIONS¹

1.—(a) No explosive substance shall be stored underground in any mine. The owner, agent, or manager of the mine shall provide a suitable place or places of storage above ground for all explosives intended to be used in the mine and shall make suitable provision conveniently near the entrance of the mine for the storage of surplus explosive brought out of the mine at the end of each shift. If any explosive remains in the possession of a workman at the end of his shift, either he shall bring it with him out of the mine and return it at once to the place of storage provided for the purpose, or, if the explosive is required for a shift immediately following, he shall deliver it personally to the workman succeeding him in his working place.

(b) No explosive shall be taken or used underground except in cartridges, and such cartridges shall be taken into the mine and kept until about to be used for the charging of a shot-

¹ The Coal Mines Act, 1911, provides that "no explosives shall be taken into or used in any mine except explosives provided by the owner, and the price, if any, charged by the owner to the workman for any explosives so provided shall not exceed the actual net cost to the owner."—Section 61 (2).

hole in a secure case or canister¹ containing not more than five pounds, and a person shall not have in use at one time in any one place more than one of such cases or canisters. No explosive shall be taken or used underground except in cartridges of the diameter of $\frac{7}{8}$ inch, $1\frac{1}{4}$ inches, $1\frac{7}{8}$ inches, $1\frac{3}{4}$ inches, or 2 inches, or in the ironstone mines in the Cleveland District, in cartridges of the diameter of $1\frac{3}{8}$ inches.

(c) No drill shall be used for the boring of a shot-hole unless it allows at least a clearance of $\frac{1}{8}$ inch over the diameter of the cartridge which is intended to be used in the shot-hole, and no person shall attempt to charge a shot-hole unless such clearance exists.

(d) If explosives containing nitro-glycerine are used, proper warming pans shall be provided by the owner, agent, or manager, and used when necessary.

(e) Detonators shall not be used in or taken for the purpose of use into any mine unless the following conditions are observed :—

- (i) Detonators shall be under the control of the manager of the mine, or some person or persons specially appointed in writing by the manager for the purpose, and shall be issued only to shot-firers appointed in pursuance of clause 6 of this Order or (in mines to which Part II of this Order does not apply) to officials specially authorized in writing by the manager.
- (ii) Shot-firers and other authorized persons shall keep all detonators issued to them, until about to be used for the charging of a shot-hole, in a suitable case or box, securely locked, separate from any other explosive.

In the case of a shaft being sunk from the surface or deepened, it shall not be deemed a contravention of the foregoing provision if the primers for charges are fitted with detonators on the surface before being taken into the shaft, provided the primers are so fitted in a workshop established under section

¹ *Case or canister*.—In *Foster v Diphwys Casson Slate Co*, 18 Q.B.D. 428 [1887], decided under the corresponding s. 23, subs. 2, of the Metalliferous Mines Act, 1872, it was held that the word “case” must be taken to mean something solid and substantial in the nature of a canister; not, strictly speaking, a canister, but a solid and substantial thing of wood or metal or some other solid substance which can be covered over so as to prevent ignition from a spark, and that a bag of linen or calico was not such a “case”.

47 of the Explosives Act, 1875, and are only taken into the shaft immediately before use by the shot-firer or other authorized person and in a thick felt bag or other receptacle sufficient to protect them from shock.

2 —(a) Every charge shall be placed in a properly drilled and placed shot-hole, and shall have sufficient stemming, and each such charge shall consist of a cartridge or cartridges of not more than one description of explosive. It shall be the duty of the person firing the shot to satisfy himself that these requirements are fulfilled before he fires the shot.

(b) No iron or steel scraper, charger, tamping rod, or stemmer shall be taken into or used in the mine; and only clay or other non-inflammable substances shall be used for stemming, and shall be provided by the owner, agent, or manager of the mine.

(c) No explosive shall be forcibly pressed into a hole, and, when a hole has been charged, the explosive shall not be unrammed nor shall any part of the stemming be removed nor shall the detonator leads be pulled out.

(d) Before any shot is charged, the direction of the hole shall, where possible, be distinctly marked on the roof or other convenient place.

(e) The person firing the shot shall, before doing so, see that all persons in the vicinity have taken proper shelter, and he shall also take suitable steps to prevent any person approaching the shot. He shall also himself take proper shelter. If he has reason to believe that there is a possibility of the shot blowing through into an adjoining place he shall send verbal warning to the persons in that adjoining place to take proper shelter.

(f) No shot shall be fired in any mine except by means of an efficient magneto-electrical apparatus or by means of a fuse complying with the conditions and ignited in the manner specified in the Fourth Schedule hereto. Provided that in a coal mine or part of a coal mine in which the use of safety lamps is not required and to which Part II of this Order does not apply and in any mine not being a coal mine, shots may be fired by means of squibs of the character specified in the Fifth Schedule hereto, subject to the following conditions:—

(a) Squibs shall not be taken into the mine except in a suitable metal case, separate from any other explosive,

and shall be kept in the case until about to be used for the firing of a shot.

- (b) No person shall shorten, bend, or untwist the slow match or touch, or light it except at the extreme outer end, or in any other way expedite its burning.
- (c) No person shall relight a touch which has died out or been extinguished.

No person shall take into a mine or have in his possession any squib other than a squib of the character specified in the Fifth Schedule.

(g) The person firing the shot shall, after the shot has been fired, make a careful examination of the place and see that it is safe in all respects

(h) Where shots are fired electrically they shall only be fired by a person authorized in writing by the manager for the purpose. The authorized person shall not use, for the purpose of firing, a cable which is less than 20 yards in length. He shall himself couple up a cable to the fuse or detonator wires and shall do so before coupling the cable to the firing apparatus. He shall take care to prevent the cable coming into contact with any power or lighting cables. He shall also himself couple the cable to the firing apparatus. Before doing so, he shall see that all persons in the vicinity have taken proper shelter.

(i) Every electrical firing apparatus shall be provided with a push button, and with a removable handle which shall not be placed in position until the shot is required to be fired and which shall be removed as soon as a shot has been fired. The removable handle shall at all times remain in the personal custody of the authorized person whilst on duty. For the push button there may be substituted an arrangement by which the firing contact is automatically made at the end of the travel of the handle and on the release of the handle is automatically broken.

3 If a shot misses fire.—

(a) The person firing the shot shall not approach or allow anyone to approach the shot-hole until an interval has elapsed of not less than ten minutes in the case of shots fired by electricity or by a squib, and not less than an hour in the case of shots fired by other means.

(b) If he has occasion to leave the place, he shall fence

off the place before leaving, and attach to each fence a danger board indicating the presence of a miss-fired shot.

(c) A second charge shall not be placed in the same hole.

(d) If the shot was fired electrically, he shall before approaching the shot-hole disconnect the cable and the removable handle from the firing apparatus and shall examine the cable and connections for any defect.

(e) Except where the miss-fire is due to a faulty cable or a faulty connection, and the shot is fired as soon as practicable after the defect is remedied, another shot shall be fired in a fresh hole which shall be drilled not less than twelve inches away from the hole in which the shot has missed fire, and shall, as far as practicable, be parallel with it.

(f) If the miss-fired shot contained a detonator, the person firing the second shot shall, before doing so, attach a string to the electric leads or the fuse of the miss-fired shot, and secure it by attaching it to the cable or to a prop or otherwise.

(g) After the second shot has been fired no person shall work in the place until the person firing the shot or an official of the mine has made a careful search for the detonator and charge of the miss-fired shot. If the detonator and charge are not found, the stone or mineral shall be loaded under the supervision of the person firing the shot, or an official, and sent to the surface in a specially marked tub. The search for the detonator and charge, and the loading of any stone or mineral which may contain a detonator, shall be carried out as far as possible without the use of tools.

(h) Should the miss-fired shot not be dislodged by the second shot, further holes must be drilled and the same precautions taken as aforesaid.

(i) The person or persons firing the shots shall report the circumstances to the manager or under-manager without delay, and the number of cartridges, if any, which have not been found, and hand to him the detonator and charge, if found.

4 The foregoing provisions of clause 2 (c) as to the removal of any part of the stemming and the pulling out of detonator leads and of clause 3 as to miss-fired shots shall not apply in

cases in which an exemption has been granted by the Secretary of State on the ground that an appliance is used which enables the detonator to be removed with safety after the shot-hole has been charged.

PART II

SPECIAL PROVISIONS

5 —(a) In all coal mines in which inflammable gas has been found within the previous three months in such quantity as to be indicative of danger, no explosive, other than a permitted explosive as hereinafter defined, shall be used in or taken for the purpose of use into the seam or seams in which the gas has been found, or any shaft or drift communicating therewith which is in process of being sunk, deepened, driven or enlarged, as the case may be.

(b) In all coal mines which are not naturally wet throughout, no explosive, other than a permitted explosive as hereinafter defined, shall be used in or taken for the purpose of use into any road or any dry and dusty part of the mine, or any shaft or drift communicating therewith which is in process of being sunk, deepened, driven or enlarged, as the case may be.

6. In all cases in which permitted explosives are required by this Order to be used. —

(a) A competent person (in this Order called a shot-firer) shall be appointed in writing by the manager of the mine for the purpose of firing shots. No person shall be so appointed if his wages depend on the amount of mineral to be gotten, and no person unless he is employed in a mine in which inflammable gas is unknown shall be qualified to be appointed or to be a shot-firer unless he has obtained the like certificates as to his ability to make accurate tests for inflammable gas and as to his eyesight as are required by section 15 of the Act in the case of firemen, examiners, or deputies, and the provisions as to such certificates shall so far as applicable have effect as if incorporated in this Order.

(b) A shot-firer shall keep a daily record (in a book which shall be kept at the mine for the purpose in accordance with the provisions of section 24 of the Act) of the number of shots fired by him, the number of miss-fired shots, if any, and the number of cartridges in each shot.

(c) No shot shall be fired in coal unless the coal has been holed to a depth greater than the depth of the shot-hole. This provision shall not apply to any anthracite mine or to any mine which may be exempted by the inspector of the division on the ground that, by reason of the character of the coal or the inclination of the seam, holing would be impracticable or dangerous.

(d) Every shot shall be charged and stemmed by or under the supervision of a shot-firer. Before the hole is charged a shot-firer shall examine it for breaks running along or across, and if any such break is found the hole shall not be charged, except in stone drifts if special permission has been given in writing by the manager or under-manager.

(e) No cartridge shall be used unless it is marked in the manner set forth in the Third Schedule hereto in addition to any marks required by the First or Second Schedule hereto.

(f)—(1) No shot shall be fired except by a shot-firer.

(ii) No shot shall be fired unless the shot-firer has examined with a locked safety lamp or other apparatus approved for the purpose by the Secretary of State the place where the shot is to be fired and all contiguous accessible places within a radius of 20 yards from the place, and has found them clear of inflammable gas. This requirement shall not apply to mines in which inflammable gas is unknown.

(iii) No shot shall be fired unless the shot-firer has examined the floor, roof, and sides of all contiguous accessible places, within a radius of 5 yards of the place where the shot is to be fired, for coal dust, and has taken efficient steps to render any dust within that area harmless.

(g) Except in driving a stone drift or in sinking pits two or more shots shall not be fired in the same place simultaneously, and the shot-firer shall make an examination immediately before the firing of each shot and shall not fire the shot unless he finds the place where the shot is to be fired and all contiguous accessible places within a radius of 20 yards free from gas and in all respects safe for firing. In stone drifts the number of shots which may be fired simultaneously shall not exceed three unless fired electrically in series.

(h) No shot shall be fired except by means of an efficient magneto-electrical apparatus so enclosed as to afford reasonable security against the ignition of inflammable gas.

(2) Each explosive shall be used in the manner and subject to the conditions prescribed in the schedules hereto

7. In the main haulage roads and main intake airways and any place immediately contiguous thereto in any coal mine which is not naturally wet throughout—

(a) No explosive shall be used other than a permitted explosive as hereinafter defined, and in accordance with the conditions prescribed by clause 6 of this Order ;

(b) No shot shall be fired without the special permission in writing of the manager or under-manager ,

(c) No shot shall be fired unless the workmen have been removed from the seam in which the shot is to be fired and from all seams communicating with the shaft on the same level, except the men engaged in firing the shot and in addition such other persons, not exceeding the number hereinafter specified, as are necessarily employed in attending to the ventilating furnaces, steam boilers, engines, machinery, winding or ventilating apparatus, signals or horses, or in inspecting the mine

In mines in which the total number of persons employed below ground does not exceed 500 .. 10

In mines in which the total number of persons employed below ground does not exceed 1000 20

In mines in which the total number of persons employed below ground exceeds 1000 .. 30

Provided that in mines where mechanical power or gravity is used for the purpose of hauling mineral from the face, and the movement of the strata renders it necessary to maintain the height of the roads by ripping, the foregoing provision relating to the removal of workmen shall not apply to men who may remain in the mine for the purpose of carrying on the ripping within such distance of the face as may be fixed by the manager with the approval of the inspector of the division, or for the purpose of repairs.

PART III

SUPPLEMENTAL

8 The foregoing provisions shall apply in the case of sinking operations with the following additions.—

(a) No explosive shall be taken or sent into the shaft until immediately before it is required for use.

(b) No shot shall be fired except by means of an efficient magneto-electrical apparatus.

(c) The firing cable shall not be coupled up to the fuse or detonator wires until the kettle, kibble, tub, bowk, or hoppit is conveniently placed for the men in the shaft to enter, and the chargeman has received a signal from the surface that the engineman is ready to draw away on receipt of the signal to do so, and the cable shall not be coupled to the firing apparatus until all persons are in a place of safety.

(d) After a shot has been fired the chargeman shall not allow any person to descend until he has descended, accompanied if necessary by not more than two other persons, and has examined the place and found it to be safe in all respects. If the place is one in which inflammable gas has been found or is likely to be found, the examination shall be made with a locked safety lamp of a type which will indicate the presence of such gas.

9. Where a mine contains separate seams, this Order shall apply to each seam as if it were a separate mine.

10. A copy of this Order (with the exception of the First, Second, and Third Schedules) shall be supplied to every shot-firer and shall also be kept posted up in some conspicuous place at or near the mine where it may be conveniently read or seen by the persons employed.

11. In this Order—

The term "permitted explosives" means (a) the explosives named and defined in the First Schedule hereto, and (b) for a period of five years from 1 January, 1914, the non-detonating explosives named and defined in the Second Schedule hereto.

Provided that the use of the explosives named and defined in the Second Schedule is permitted only for the purpose of bringing down coal (whether by shots placed in the coal or by shots placed in the stratum immediately above or below the coal) and only in the following class of mines, that is, mines which are not liable to blowers or sudden outbursts of fire-damp and in which fire-damp does not exist in the coal at a pressure which makes the use of such explosives dangerous and in which the dust on the floor, roof, and sides of the roads is either naturally so largely composed of combustible matter as not to be dangerous or has been rendered

so by artificial means. If any question arises as to whether a mine is a mine of the aforesaid class or not, the decision of the inspector of the division shall be final, subject to an appeal to the Chief Inspector of Mines

Provided further, as regards the explosives named and described in either the First or the Second Schedule, that where the composition, quality, or character of any explosive is defined in those schedules, any article alleged to be such explosive which differs therefrom in composition, quality, or character whether by reason of deterioration or otherwise, shall not be deemed to be the explosive so defined, but an owner, agent, or manager shall not be responsible for the composition, quality, or character of an explosive, if he shows that he has in good faith obtained a written certificate from the maker of the explosive that it complies with the terms of the schedules, and that he has taken all reasonable means to prevent deterioration of the explosive while stored.

The term "coal mine" includes mines in which coal is found, whether worked or not.

The term "road" includes all roads of any description extending from the shaft or outlet to within 10 yards of the coal face.

The term "main haulage road" means a road which has been, or for the time being is, in use for moving tubs by gravity or by mechanical power.

12. This Order shall come into force on the 15th September, 1913, from which date the Explosives in Coal Mines Orders of the 21st May, 1912, the 15th October, 1912, and the 31st March, 1913, are revoked provided that the explosives named and defined in the First Schedule to the Order of the 21st May, 1912, shall be deemed to be included in the First Schedule to this Order until the 31st December, 1913.¹

13. This Order may be cited as the Explosives in Coal Mines Order of the 1st September, 1913

R. McKenna,
One of His Majesty's Principal
Secretaries of State.

Whitehall,
1st September, 1913.

¹ By Order dated November 13, 1913, the 15th March, 1914, is substituted for the 31st December, 1913 (Statutory Rules and Orders, 1913, No. 1187).

FIRST SCHEDULE

Abelite No 1, consisting of the following mixture :—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium ...	70	66
Di-nitro-benzol	7 5	6 5
Tri-nitro-toluol	7 5	6 5
Chloride of sodium	18 5	16 5
Moisture .. .	1	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of Manila paper, fireproofed and thoroughly waterproofed with a mixture of carnauba and paraffin waxes ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 14 ounces ;
- (4) That the explosive has been made at the works of the Lancashire Explosives Company, Limited, at Withnell, in the County of Lancaster ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 5th day of March, 1914 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 14 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the

time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients

Four ounces of Abelite No. 1 gave a swing of 2.85 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine

Ajax Powder, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine ..	23.5	21.5
Nitro-cotton	1	0.5
Tri-nitro-toluol	4	3
and } together		
Di-nitro-toluol		
Perchlorate of potassium	38.5	36.5
Wood-meal (dried at 100° C.) ..	11.5	9.5
Oxalate of ammonium	26	24
Moisture	1.5	—

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 12 ounces ,

- (4) That the explosive has been made at the works of Nobel's Explosives Company, Limited, at Ardeer, in the county of Ayr,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 14th day of February, 1913
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 12 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Ajax Powder give a swing of 2.69 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of Nitro-glycerine

Ammonite No 2, consisting of the following mixture —

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium	75	71
Nitrate of potassium	18	16
Di-nitro-naphthalene	3	2
Chloride of sodium	8	7
Moisture	1	—

Provided —

- (1) That the explosive shall be used only when contained in a case of lead and tin alloy thoroughly waterproofed with pure paraffin wax,

- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 10 ounces,
- (4) That the explosive has been made at the works of the Miners' Safety Explosive Company, Limited, at Stanford-le-Hope, in the county of Essex,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 6th of March, 1913;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 10 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives", and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Ammonite No 2 gave a swing of 1.99 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Ammonite No. 3, consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitrate of ammonium	72	68
Nitrate of sodium .. .	23	21
Tri-nitro-naphthalene	4	3
Chloride of ammonium	4 5	3'5
Moisture	1	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of lead and tin alloy thoroughly waterproofed with pure paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ,
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 12 ounces ;
- (4) That the explosive has been made at the works of the Miners' Safety Explosive Company, Limited, at Stanford-le-Hope, in the county of Essex ,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 5th day of March, 1913 ,
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 12 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " , and, further, that each inner package shall be clearly

marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Ammonite No 3 gave a swing of 2·12 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Arkite No. 2, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	33	31
Nitro-cotton	1·5	0·5
Nitrate of potassium	28	26
Wood-meal (dried at 100° C.)	10	8
Oxalate of ammonium	31	29
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 40 ounces ,¹
- (4) That the explosive has been made at the works of Messrs. Kynoch-Arklow, Limited, at Ferrybank, Arklow, in the county of Wicklow ;

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test.

- (5) That the explosive is in all respects similar to the sample submitted to test on the 4th day of March, 1914 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 40 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Arkite No 2 gave a swing of 2 41 inches to the Ballistic Pendulum compared with a swing of 3 27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Bellite No. 2, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium	62'5	59'5
Di-nitro-benzol	13	11
Chloride of sodium	28'5	25 5
Moisture	0'75	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of Manilla paper, fireproofed and thoroughly waterproofed with a mixture of carnauba and paraffin waxes ,

- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium),
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 32 ounces,¹
- (4) That the explosive has been made at the works of the Lancashire Explosives Company, Limited, at Withnell, in the county of Lancaster;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 6th day of January, 1913;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 32 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Bellite No 2 gave a swing of 2·42 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test

Bellite No. 4, consisting of the following mixture :—

Ingredients.	Parts by weight	
	Not more than	Not less than
Nitrate of ammonium . . .	70	67
Di-nitro-benzol	14	12
Chloride of sodium	19	17
Moisture	1'5	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of Manilla paper, fireproofed and thoroughly waterproofed with a mixture of carnauba and paraffin waxes ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 12 ounces ;
- (4) That the explosive has been made at the works of the Lancashire Explosives Company, Limited, at Withnell, in the county of Lancaster ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 28th day of February, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 12 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly

marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Bellite No. 4 gave a swing of 2·72 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Britonite No. 2, consisting of the following mixture.—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	25	23
Nitrate of potassium	32	29
Wood-meal (dried at 100° C.)	36·5	33·5
Oxalate of ammonium	9	7
Moisture	5	1·5

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 24 ounces,¹
- (4) That the explosive has been made at the works of the British Explosive Syndicate, Limited, at Pitsea, in the county of Essex ,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 3rd day of June, 1913.

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test.

- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 24 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Britonite No. 2 gave a swing of 2.26 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Cambrite, consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	24	22
Nitrate of barium	4.5	3
Nitrate of potassium	29	26
Wood-meal (dried at 100° C.)	35	32
Carbonate of calcium	0 5	—
Oxalate of ammonium	9	7
Moisture	6	3.5

Provided —

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15

- grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 30 ounces;
 - (4) That the explosive has been made at the works of Nobel's Explosives Company, Limited, at Ardeer, in the county of Ayr;
 - (5) That the explosive is in all respects similar to the sample submitted to test on the 19th day of December, 1912;
 - (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 30 ounces in any one shot-hole"; and
 - (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Cambrite gave a swing of 1.98 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Dreadnought Powder, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium	77	73
Nitrate of sodium	17	14
Chloride of ammonium	6	4
Tri-nitro-toluol	5	3
Oil red	0.1	—
Moisture	1	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with a mixture of carnauba and paraffin waxes ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 32 ounces ;
- (4) That the explosive has been made at the works of Roburite and Ammonal, Limited, at Gathurst, near Wigan, in the county of Lancaster ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 25th day of September, 1912 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 32 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Dreadnought Powder gave a swing of 2·05 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Duxite, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	33	31
Nitro-cotton	1'5	0'75
Nitrate of sodium	29	27
Wood-meal (dried at 100° C.)	10	8
Oxalate of ammonium	31	28
Moisture	2 5	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 12 ounces ;
- (4) That the explosive has been made at the works of the Westphalia Anhalt Explosive Company, at Haltern and Remsdorf, in Germany ,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 20th day of January, 1914 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 12 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly

marked with the words "Permitted Explosive, to be used only with not less than No 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Duxite gave a swing of 2.45 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Dynobel, consisting of the following mixture —

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro glycerine . .	33.5	31.5
Nitro-cotton . . .	1	0.5
Perchlorate of potassium .	28	26
Wood-meal (dried at 100° C.) .	10.5	8.5
Oxalate of ammonium ..	30.5	28.5
Moisture	1.5	—

Provided —

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 22 ounces ;
- (4) That the explosive has been made at the works of Nobel's Explosives Company, Limited, at Ardeer, in the county of Ayr ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 13th day of February, 1913 ;

- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 22 ounces in any one shot-hole"; and
- (7) That, in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Dynobel gave a swing of 2·61 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Essex Powder, consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	24	22
Nitro-cotton	1 5	0 5
Nitrate of potassium	35	33
Wheat flour (dried at 100° C.)	35	32
Chloride of ammonium	7	5
Moisture	5	2

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with a mixture of ceresine and resin ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing

15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);

- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 38 ounces;
- (4) That the explosive has been made at the works of the Explosives and Chemical Products, Limited, at Bramble Island, in the county of Essex;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 7th day of March, 1913;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 38 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Essex Powder gave a swing of 2·17 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Expedite, consisting of the following mixture:—

Ingredients.	Parts by weight	
	Not more than	Not less than
Nitrate of ammonium	36	33
Nitrate of potassium . .	34	32
Chloride of ammonium . . .	21	19
Tri-nitro-toluol	13	11
Moisture	1·5	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 32 ounces ;¹
- (4) That the explosive has been made at the works of the Explosives and Chemical Products, Limited, at Bramble Island, in the county of Essex ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 30th day of October, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 32 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Expedite gave a swing of 2·62 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test

Haylite No. 1, consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	27	25
Nitro-cotton	1 5	0'5
Wood-meal (dried at 100° C) . .	14	12
Nitrate of potassium	21	19
Nitrate of barium	21	19
Mineral jelly (free from acid) ...	8	6
Oxalate of ammonium	12	10
Moisture	2'5	0'5

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ,
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 10 ounces ;
- (4) That the explosive has been made at the works of the National Explosives Company, Limited, at Upton Towans, Gwithian, in the county of Cornwall ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 11th day of December, 1912 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 10 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ;

and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients

Four ounces of Haylite No. 1 gave a swing of 2·18 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Kentite, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium . . .	35·5	32 5
Nitrate of potassium . . .	35	32
Chloride of ammonium . . .	18	16
Tri-nitro-toluol	16	14
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 18 ounces ;
- (4) That the explosive has been made at the Works of British Westfalte, Limited, at Denaby, in the county of York ,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 12th day of December, 1912 ,

- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 18 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Kentite gave a swing of 2·64 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Kynarkite, consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	26	24
Nitrate of potassium	29	27
Nitrate of barium	4	2
Wood-meal (dried at 100° C.) .. .	36·5	33·5
Oxalate of ammonium	6	4
Moisture	5·5	2

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts

- by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 20 ounces;
 - (4) That the explosive has been made at the works of Messrs. Kynoch-Arklow, Limited, at Ferrybank, Arklow, in the county of Wicklow;
 - (5) That the explosive is in all respects similar to the sample submitted to test on the 30th day of July, 1913;
 - (6) That each cartridge, in addition to any markings required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 20 ounces in any one shot-hole", and
 - (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Kynarkite gave a swing of 2·21 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Melling Powder, consisting of the following mixture.—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	6	4
Tri-nitro-toluol	7	5
Nitrate of ammonium	55	51
Nitrate of sodium	13	11
Wood-meal (dried at 100° C)	5	3
Oxalate of ammonium	20	18
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a stout case of paper thoroughly waterproofed with a mixture of ceresine and resin ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 12 ounces ;
- (4) That the explosive has been made at the works of the Cotton Powder Company, Limited, at Uplees Marshes, near Faversham, in the county of Kent, or at their works near Melling, in the county of Lancaster ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 4th day of March, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 12 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Melling Powder gave a swing of 2.62 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Negro Powder No. 2, consisting of the following mixture :—

Ingredients.	Parts by weight	
	Not more than	Not less than
Nitrate of ammonium	58	55
Chloride of sodium	29	26
Tri-nitro-toluol	16	14
Graphite	1	0·5
Colouring matter	0·1	—
Moisture	1	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with a mixture of carnauba and paraffin waxes ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 20 ounces ;
- (4) That the explosive has been made at the works of Roburite and Ammonal, Limited, at Gathurst, near Wigan, in the county of Lancaster ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 5th day of November, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 20 ounces in any one shot-hole", and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly

marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Negro Powder No. 2 gave a swing of 2.21 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Neonal, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	22	20
Nitro-cotton	1 5	0 5
Tri-nitro-toluol } and } together	0.4	—
Di-nitro-toluol }		
Wood-meal (dried at 100° C.)	16	14
Perchlorate of potassium .. .	38	36
Oxalate of ammonium	26	24
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 16 ounces ;
- (4) That the explosive has been made at the works of the New Explosives Company, Limited, at Stowmarket, in the county of Suffolk ;

- (5) That the explosive is in all respects similar to the sample submitted to test on the 13th day of March, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 16 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Neonal gave a swing of 2·56 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

New Fortex, consisting of the following mixture :—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium .	36	33
Nitrate of potassium .	34	32
Amido compound ..	13	11
Chloride of ammonium . . .	21	19
Moisture	1·5	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with a mixture of ceresine and resin ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i e. the detonator or electric detonator to be used shall possess an effective detonative strength

as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium),

- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 10 ounces;
- (4) That the explosive has been made at the works of the Explosives and Chemical Products, Limited, at Bramble Island, in the county of Essex;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 31st day of October, 1913;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 10 ounces in any one shot-hole", and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of New Fortex gave a swing of 2.61 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Nitro-Densite, consisting of the following mixture:—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	19	17
Nitrate of barium	26	24
Wood-meal (dried at 100° C.)	6	4
Starch (dried at 100° C.)	27	24
French chalk (ignited)	24	22
Moisture	5	2

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ,
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 28 ounces ;
- (4) That the explosive has been made at the works of Kynoch-Arklow, Limited, at Ferrybank, Arklow, in the county of Wicklow ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 10th day of March, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 28 ounces in any one shot-hole" ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives" ; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Nitro-Densite gave a swing of 1·47 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Permon Powder, consisting of the following mixture :—

Ingredients.	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	13	11
Collodion cotton	0 5	0 2
Glycerine	5	3
Flour of potatoes (dried at 100° C.) ..	10 5	8 5
Nitrate of ammonium	57	54
Nitrate of sodium	1 5	0 5
Chloride of sodium	18	16
Moisture	3	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of stout paper thoroughly waterproofed with a mixture of paraffin wax, resin, and mineral oil ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 18 ounces ;
- (4) That the explosive has been made at the works of the Carbonite Syndicate, Limited, at Schlebusch, in Germany ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 8th day of October, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 18 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words

"As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Permon Powder gave a swing of 2·57 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Pt-ite No 2, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine ...	25	23
Nitrate of potassium	31	28
Wood-meal (dried at 100° C.)	36	33
Oxalate of ammonium	9	7
Moisture ..	5	2 5

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 32 ounces ;¹
- (4) That the explosive has been made at the works of the New Explosives Company, Limited, at Stowmarket, in the county of Suffolk ,

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test.

- (5) That the explosive is in all respects similar to the sample submitted to test on the 12th day of March, 1913,
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 32 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives", and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Pit-ite No. 2 gave a swing of 2·15 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Pitsea Powder No. 2, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	7	6
Nitrate of ammonium	56·5	53 5
Nitrate of potassium	11	9
Wood-meal (dried at 100° C.)	10	8
Oxalate of ammonium	19·5	17 5
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a stout case of paper thoroughly waterproofed with a mixture of ceresine and resin,
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength

as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);

- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 8 ounces;
- (4) That the explosive has been made at the works of the British Explosives Syndicate, Limited, at Pitsea, in the county of Essex;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 17th day of October, 1913;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 8 ounces in any one shot-hole"; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Pitsea Powder No. 2 gave a swing of 2.64 inches to the Ballistic Pendulum compared with a swing of 3.27 inches, given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Sheppey Powder, consisting of the following mixture:—

Ingredients.	Parts by weight	
	Not more than	Not less than
Nitro-glycerine . . .	28	26
Nitrate of potassium . . .	32	30
Wood-meal (dried at 100° C.) ...	33	30
Oxalate of ammonium ...	7	5
Moisture	6	3

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grams of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 10 ounces ;
- (4) That the explosive has been made at the works of the Cotton Powder Company, Limited, at Uplees Marshes, near Faversham, in the county of Kent, or at their works near Melling, in the county of Lancaster ,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 28th day of October, 1913 ,
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 10 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Sheppey Powder gave a swing of 2·10 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Sunderite consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	10	8
Nitrate of ammonium . .	54'5	50 5
Perchlorate of potassium	10	8
Wood-meal (dried at 100° C) . .	9	7
Oxalate of ammonium	21	19
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with a mixture of ceresine and resin ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 16 ounces ;
- (4) That the explosive has been made at the works of Nobel's Explosives Company, Limited, at Ardeer, in the county of Ayr ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 24th day of October, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 16 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly

marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Sunderite gave a swing of 2.66 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitroglycerine.

Super-Curtisite, consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitrate of ammonium ...	40	37
Nitrate of potassium ..	31	28
Tri-nitro-toluol	11	9
Chloride of ammonium . . .	23	21
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 16 ounces ;
- (4) That the explosive has been made at the works of Messrs. Curtis's and Harvey, Limited, at Cliffe, in the county of Kent ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 19th day of March, 1914 ;
- (6) That each cartridge, in addition to any marking required

in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 16 ounces in any one shot-hole"; and

- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Super-Curtisite gave a swing of 2·71 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Super-Excellite, consisting of the following mixture:—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	5	3·5
Nitrate of ammonium	77	73 5
Nitrate of potassium	8	6·5
Wood-meal (dried at 100° C.) ..	4	2
Oxalate of ammonium . . .	11	9
Moisture	1·5	—

Provided:—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts

- by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 10 ounces,
 - (4) That the explosive has been made at the works of Messrs. Curtis's and Harvey, Limited, at Cliffe, in the county of Kent,
 - (5) That the explosive is in all respects similar to the sample submitted to test on the 26th day of February, 1913;
 - (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 10 ounces in any one shot-hole", and
 - (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives," and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Super-Excellite gave a swing of 2.74 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Super-Excellite No. 2, consisting of the following mixture:—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	6	4
Nitrate of ammonium	51.5	48.5
Nitrate of potassium	21	19
Starch	5.5	3.5
Chloride of ammonium	6	4
Oxalate of ammonium	16	14
Moisture	1.5	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 14 ounces ;
- (4) That the explosive has been made at the works of Messrs Curtis's and Harvey, Limited, at Cliffe, in the county of Kent ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 17th day of March, 1914 ,
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall and be clearly marked with the words " Not more than 14 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " , and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Super-Excellite No 2 gave a swing of 2·72 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine

Superite, consisting of the following mixture :—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	4 5	3 5
Nitrate of ammonium	84	80
Nitrate of potassium	11	9
Starch (dried at 100° C.)... ..	5	2
Moisture	2	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of stout paper thoroughly waterproofed with a mixture of paraffin wax, ceresine wax, resin, and mineral oil ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 7 (i e the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 10 ounces ;
- (4) That the explosive has been made at the works of the Carbonite Syndicate, Limited, at Schlebusch, in Germany ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 10th day of December, 1912 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 10 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " , and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be

used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients

Four ounces of Superite gave a swing of 2·53 inches to the Ballistic Pendulum, compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Super-Kolax, consisting of the following mixture ·

Ingredients	Parts by weight	
	Not more than	Not less than
Nitro-glycerine	26 5	24 5
Nitrate of potassium	26 5	24 5
Nitrate of barium	6	4
Oxalate of ammonium	8	6
Wood-meal (dried at 100° C)	28	26
Starch (dried at 100° C.)	8	6
Moisture	4	2

Provided —

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ,
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 30 ounces ,¹
- (4) That the explosive has been made at the works of Messrs. Curtis's and Harvey, Limited, at Cliffe, in the county of Kent ;

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test

- (5) That the explosive is in all respects similar to the sample submitted to test on the 27th day of February, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words "Not more than 30 ounces in any one shot-hole", and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients

Four ounces of Super-Kolax gave a swing of 2·10 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Super-Kolax No. 2, consisting of the following mixture :—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	29·5	27·5
Nitro-cotton	1·5	0·5
Nitrate of potassium	17·5	15·5
Nitrate of barium	6	4
Oxalate of ammonium	10·5	8·5
Wood-meal (dried at 100° C.) . .	29·5	26·5
Starch (dried at 100° C.) .. .	9·5	7·5
Moisture	5	2

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper ,

- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 32 ounces ;¹
- (4) That the explosive has been made at the works of Messrs. Curtis's and Harvey, Limited, at Cliffe, in the county of Kent,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 18th day of March, 1914 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 32 ounces in any one shot-hole " , and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " , and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Super-Kolax No. 2 gave a swing of 2·21 inches to the Ballistic Pendulum, compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test.

Syndite, consisting of the following mixture :—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine	12	10
Collodion cotton	0.3	0.1
Glycerine	5	2
Starch (dried at 100° C.)	5	2
Nitrate of ammonium	49	45
Nitrate of sodium	9	7
Chloride of sodium	28	26
Moisture	2	—

Provided .—

- (1) That the explosive shall be used only when contained in a case of stout paper thoroughly waterproofed with a mixture of paraffin wax, ceresine wax, resin, and mineral oil ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ;
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 40 ounces,¹
- (4) That the explosive has been made at the works of the Carbonite Syndicate, Limited, at Schlebusch, in Germany ,
- (5) That the explosive is in all respects similar to the sample submitted to test on the 15th day of January, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 40 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made

¹ This is the greatest weight of explosive which may be loaded into the gun according to the regulations governing the test for the Permitted List.

under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives"; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Syndite gave a swing of 2·22 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Tulol No 2, consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitro-glycerine ...	26	24
Nitrate of sodium . . .	30	28
Chloride of sodium . . .	10 5	8 5
Wood-meal (dried at 100° C) .	34	31
Bicarbonate of sodium ...	0 5	—
Moisture .. .	5	2·5

Provided :—

- (1) That the explosive shall be used only when contained in a non-waterproofed wrapper of parchment paper, the outer waterproofed paper having been previously removed,
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium);
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 22 ounces,¹

¹ This was the greatest weight which could be loaded into the gun when the explosive was submitted for the test.

- (4) That the explosive has been made at the works of the Westphalia Anhalt Explosive Company, at Haltern and Reinsdorf, in Germany ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 27th day of May, 1913 ;
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 22 ounces in any one shot-hole ", and the outer waterproofed paper shall be marked " To be removed before firing "; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives "; and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Tutol No. 2 gave a swing of 2.11 inches to the Ballistic Pendulum compared with a swing of 3.27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Uplees Powder, consisting of the following mixture :—

Ingredients.	Parts by weight.	
	Not more than	Not less than
Nitrate of ammonium	65	62
Tri-nitro-toluol	6	4
Chloride of ammonium	15	13
Nitrate of sodium	14.5	12.5
Starch (dried at 100° C.) . . .	4	2
Moisture	1.5	—

Provided :—

- (1) That the explosive shall be used only when contained in a stout case of paper thoroughly waterproofed with a mixture of ceresine and resin ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 7 (i e the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 23 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ,
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 16 ounces ,
- (4) That the explosive has been made at the works of the Cotton Powder Company, Limited, at Uplees Marshes, near Faversham, in the county of Kent, or at their works near Mellong, in the county of Lancaster ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 14th day of March, 1913 ,
- (6) That each cartridge, in addition to any marking required by the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 16 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " , and, further, that each inner package shall be clearly marked with the words " Permitted Explosive, to be used only with not less than No. 7 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Uplees Powder gave a swing of 2·64 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

Westfalite No. 3, consisting of the following mixture :—

Ingredients.	Parts by weight	
	Not more than	Not less than
Nitrate of ammonium	61	58
Nitrate of potassium	15	13
Chloride of ammonium	22	20
Tri-nitro-toluol	6	4
Moisture	1	—

Provided :—

- (1) That the explosive shall be used only when contained in a case of paper thoroughly waterproofed with paraffin wax ;
- (2) That the explosive shall be used only with a detonator or electric detonator of not less strength than that known as No. 6 (i.e. the detonator or electric detonator to be used shall possess an effective detonative strength as great as, or greater than, that of one containing 15 grains of a composition consisting in every 100 parts by weight of 80 parts of fulminate of mercury and 20 parts of chlorate of potassium) ,
- (3) That the greatest weight of the explosive which may be used in any one shot-hole shall not exceed 12 ounces ,
- (4) That the explosive has been made at the works of British Westfalite, Limited, at Denaby, in the county of York ;
- (5) That the explosive is in all respects similar to the sample submitted to test on the 21st day of February, 1913 ,
- (6) That each cartridge, in addition to any marking required in the Third Schedule to this Order, shall also be clearly marked with the words " Not more than 12 ounces in any one shot-hole " ; and
- (7) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words " As defined in the List of Permitted Explosives " ; and, further, that each inner package shall be clearly

marked with the words "Permitted Explosive, to be used only with not less than No. 6 detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients.

Four ounces of Westfalite No. 3 gave a swing of 2·55 inches to the Ballistic Pendulum compared with a swing of 3·27 inches given by four ounces of Gelignite containing 60 per cent of nitro-glycerine.

SECOND SCHEDULE

Bobbinite (1st definition), consisting of the following mixture :—

Ingredients	Parts by weight.	
	Not more than	Not less than
Nitrate of potassium	65	62
Charcoal	19 5	17
Sulphur	2 5	1 5
Sulphate of ammonium }	17	13
Sulphate of copper }		
Moisture	2 5	—

the sulphate of ammonia not to exceed 11 per cent by weight of the finished explosive.

Bobbinite (2nd definition), consisting of the following mixture :—

Ingredients	Parts by weight	
	Not more than	Not less than
Nitrate of potassium	66	63
Charcoal	20 5	18 5
Sulphur	2 5	1 5
Rice or maize starch	9	7
Paraffin wax	3 5	2 5
Moisture	3	—

Provided :—

- (1) That the explosive shall be used only when :—
 - (a) each pellet is thoroughly coated with paraffin wax of a melting point of not less than 120° F, similar to the sample submitted to test on the 11th day of September, 1903, or
 - (b) each pellet is contained in a wrapper of brown paper similar in all respects to that in which it was submitted to test on the 29th day of October, 1902,
- (2) That the explosive has been compressed into a pellet of a density not exceeding :—
 - (a) 1.42 if manufactured according to the 1st definition
 - (b) 1.48 if manufactured according to the 2nd definition.
- (3) That the explosive shall be used only with an electric fuse containing 5 grains of gunpowder or with other means equally efficient in igniting the explosive, but not with a detonator or electric detonator ;
- (4) That the explosive has been made at the Home, Marsh, or Oare Works of Messrs. Curtis's and Harvey, Limited, at Faversham, in the county of Kent, or at their works at Roslin, in the county of Edinburgh, or at their works at Glyn Neath, in the county of Glamorgan ;
- (5) That the explosive is in all respects similar to one or other of the samples submitted to test on the 29th day of October, 1902, on the 6th day of February, 1903, on the 12th day of February, 1903, or on the 11th day of September, 1903 ;
- (6) That in addition to the marking on the outer package required by an Order of the Secretary of State, made under the Explosives Act, 1875, and in force for the time being, such outer package shall bear the words "As defined in the List of Permitted Explosives" ; and, further, that each inner package shall be clearly marked with the words "Permitted Explosive, not to be used with a detonator," and also with the name of the explosive, the name of the manufacturer, the date and place of manufacture, and the nature and proportion of the ingredients ¹

¹ *Bobbinate* is permitted only for the purpose of bringing down coal in certain mines for a period of five years from 1st January, 1914.

THIRD SCHEDULE

Each cartridge, in addition to any marking required in the First or Second Schedule to this Order, shall also be marked with the outline of a Crown with the letter P in the centre. In the case of compressed cartridges, which are not contained in a wrapper of paper or metal, the outline of the Crown must be indented on the end of the pellet.

FOURTH SCHEDULE

The fuse shall consist of a core of gunpowder, protected by not less than three coverings of thread or by not less than two coverings of thread and one of tape or gutta-percha. The fuse shall be of such quality that the time of burning of the fuse shall not vary more than ten seconds above or below the rate of 90 seconds for every yard of fuse. The fuse shall be ignited by means of an igniter contained in a tube which when attached to the fuse forms a completely closed chamber or, in the case of a mine or part of a mine in which the use of safety lamps is not required, the fuse may be ignited by means of a naked light subject to the conditions that in such mine or part of a mine no person while charging a shot-hole or handling any explosive not contained in a securely closed case or canister shall smoke or allow any naked light to be within a distance of four feet of the shot-hole or explosive, and before a light is brought near to the hole for the purpose of firing the shot all other explosive shall be removed from the neighbourhood of the shot-hole.

FIFTH SCHEDULE

(a) A squib consisting of a tube of paper or other suitable material, coated externally with a solution of silicate of soda or other suitable solution, which will keep it in shape, protect it from damp, and prevent it from smouldering, filled with gunpowder and having one end closed by a plug and the other end closed by being twisted, such twisted end being coated with sulphur or treated with saltpetre.

(b) The Brock squib consisting of a tube or case of non-smouldering paper, filled with slow-burning fuse composition primed and capped with touch paper at one end; the other end being fitted with a length of quickmatch enclosed in a tube of non-smouldering paper, which is secured in position by string tied round the end of the fuse case.

Provided that in every case the squib shall have been manufactured at an explosives factory licensed by the Secretary of State and that the time of burning the squib when tested at the factory (which test whenever so required by one of H M. Inspectors of Explosives shall be carried out by, or in the presence of, such Inspector) shall not vary more than 15 seconds above or below 75 seconds.

COAL MINES REGULATION ACT, 1908¹

HOURS OF LABOUR

The object of this Act is to limit the hours of underground working in coal mines ; this is effected by enacting that no workman, with certain specified exceptions, may remain below ground either for the purpose of his work or for going to or from his work during any consecutive twenty-four hours for more than eight hours, save in certain specified contingencies. A strict application of the eight hours rule would, however, mean that not more than eight hours must elapse between the first workman of the shift descending the mine and the last workman of that shift ascending the mine ; in that case the eight hours would include the time occupied by the men in descending and ascending. The Act does not include that time, for it reckons the eight hours from the time the last workman of the shift descends and the first workman of that shift ascends, and therefore the time occupied in ascending by all the workmen after the first workman enters the cage is not counted, but dilatory methods of drawing in order to keep the workmen for a longer period underground are guarded against by requiring the employer to keep posted at the pithead the time at which the descent and ascent of the men is to commence and to be completed, and the times so fixed are subjected to the approval of the mine's inspector, or if the employer be not

¹ 8 Edw. VII, c. 57

satisfied with the inspector's decision, of an arbitrator. Moreover, a register must be kept by the employer of the times occupied in ascending and descending, and the workmen may appoint a person to be at the pithead to check such register.

The obligation of the eight hours rule is relaxed in the case of accident or danger or emergency work, and a repairing shift of workmen, for the purpose of avoiding Sunday work, may recommence their work on Saturday after the termination of eight hours from the time they last ceased underground work.

A remarkable provision of the Act is that which enables the employer on not more than sixty days in the year to extend the working hours by one hour beyond the statutory eight hours. This power on the part of the employer can be exercised in the most arbitrary manner; he can avail himself of the whole or any portion of the sixty days, either consecutively or singly, at such intervals as may appear to him expedient, and it would seem that the workman has no option but to submit to this extension at the pleasure of his employer, or failing to do so, to commit an actionable breach of contract. The good sense of employers and workmen will no doubt render it possible for this provision to work smoothly by making arrangements in advance as to the conditions under and occasions on which the extension of hours should be enforced.

It may be noted that in the event of war or other great national emergency, or some great economic disturbance, it is in the power of the Government by Order in Council to suspend the operation of the Act.

1. *Limit of hours of work below ground in coal mines.*—

(1) Subject to the provisions of this Act a workman shall not be below ground in a mine for the purpose of his work, and of going to and from his work, for more

than eight hours during any consecutive twenty-four hours.¹

(2) No contravention of the foregoing provisions shall be deemed to take place in the case of a workman working in a shift if the period between the times at which the last workman in the shift leaves the surface and the first workman in the shift returns to the surface does not exceed eight hours; nor shall any contravention of the foregoing provisions be deemed to take place in the case of any workman who is below ground for the purpose of rendering assistance in the event of accident, or for meeting any danger or apprehended danger, or for dealing with any emergency or work uncompleted through unforeseen circumstances which requires to be dealt with without interruption in order to avoid serious interference with ordinary work in the mine or in any district of the mine, or, in the case of stallmen when engaged in the process of taking down top coal in square or wide work in the thick coal of the South Staffordshire district, so long as their presence in or near the stall is necessary to ensure safety.

(3) The owner, agent, or manager of every mine shall fix for each shift of workmen in the mine the time at which the lowering of the men to the mine is to commence and to be completed, and the time at which the raising of the men from the mine is to commence and to be completed, in such a manner that every workman shall have the opportunity of returning to the surface without contravention of the foregoing provisions of this section, and shall post and keep posted at the pithead a conspicuous notice of the times so fixed, and shall make all arrangements necessary for the observance of those times in lowering and raising the men

¹ See *Robinson v. Insoles*, 102 L.T. 45 [1910].

(4) The interval between the times fixed for the commencement and for the completion of the lowering and raising of each shift of workmen to and from the mine shall be such time as may for the time being be approved by the inspector at the time reasonably required for the purpose. Provided that, in the event of any accident to the winding machinery, or other accident interfering with the lowering or raising of workmen, the interval may temporarily be extended to such extent as may be necessary ; but in any such case the owner, agent, or manager of the mine shall on the same day send notice of the extension and the cause thereof to the inspector, and the extension shall not continue beyond such date as may be allowed by the inspector.

(5) In the event of the owner, agent, or manager feeling aggrieved by a decision of the inspector under the last foregoing subsection, the matter shall, in accordance with regulations as to procedure and costs made by the Secretary of State, be referred to the decision of a person appointed by the judge of county courts for the district, or in Scotland by the sheriff of the county, in which the mine is situate, whose decision shall be final ; but until such decision is given the times approved by the inspector shall be in force as respects the mine.

(6) A repairing shift of workmen may, notwithstanding the provisions of this section, for the purpose of avoiding work on Sunday, commence their period of work on Saturday before twenty-four hours have elapsed since the commencement of their last period of work, so long as at least eight hours have elapsed since the termination thereof.

(7) For the purposes of this Act, the expression " workman " means any person employed in a mine below ground who is not an official of the mine (other than a fireman, examiner, or deputy), or a mechanic or horse-

keeper, or a person engaged solely in surveying or measuring, and any number of workmen whose hours for beginning and terminating work in the mine are approximately the same shall be deemed to be a shift of workmen :

Provided that—

- (a) In case of a fireman, examiner, or deputy, on-setter, pump-minder, fanman, or furnace-man, the maximum period for which he may be below ground under this Act shall be nine hours and a half . and
- (b) Where the work of sinking a pit or driving a cross-measure drift is being carried on continuously, no contravention of the provisions of this Act shall be deemed to take place as respects any workman engaged on that work if the number of hours spent by him at his working place does not exceed six at any one time, and the interval between the time of leaving the working place and returning thereto is in no case less than twelve hours.

If any question under this section arises (otherwise than in legal proceedings) whether any person is a workman or is a workman of any particular class, that question shall be referred to the Secretary of State, and his decision shall be final.

Workmen working in shifts.—By section 1 (2) there is no contravention of the maximum period in the case of a workman working in a shift, if the period between the times at which the last workman in the shift leaves the surface and the first workman in the shift returns to the surface does not exceed eight hours. By section 1 (7) the maximum period for a fireman is nine and a half hours.

When two firemen, members of a shift, had been below for fifteen and a quarter hours, it was held that the provisions of section 1 (1) and (2) applied to them with the modification that nine and a half hours was to be read into those sub-

sections when they are applied to the case of a fireman. Accordingly, if firemen are working in a shift, and if the period between the times at which the last fireman leaves the surface and the first fireman returns to the surface does not exceed nine and a half hours, there is no contravention of the Act. (*Roger v Stevenson* [1913], S.C. (J.) 30)

Whether a fireman is a member of a shift or not is a question of fact for the judge who tries the case, and is to be determined on a strict view of the definition of a shift contained in section 1 of the Act. (*Ib.*)

Meeting any danger.—By subsection 2 the maximum period of consecutive employment below ground may be exceeded under the special circumstance therein mentioned, such as “any danger or apprehended danger.”

In *Thorneycroft v. Archibald* [1913], S.C. (J) 45, it was held that “danger” was limited to danger arising out of some abnormal occurrence, and accordingly that workmen engaged on Sunday night and Monday morning in repairing falls such as were expected to occur, and normally did occur, every week when the pit was idle between Saturday and Monday, did not fall within the meaning of the section.

Regulations as to procedure and costs.—In pursuance of subsection 5 the Secretary of State has made regulations, dated 15 May, 1909,¹ *post*, p. 345.

2. *Register of times of descent and ascent*—(1) The owner, agent, or manager of every mine shall appoint one or more persons to direct at the pithead the lowering and raising of men to and from the mine, and shall cause a register to be kept in the form prescribed by the Secretary of State, and containing the particulars prescribed by him with respect to the times at which men are lowered into and raised from the mine, and the cases in which any man is below ground for more than the time fixed by this Act, and the cause thereof, and the register shall be open to inspection by the inspector.

(2) The workmen in a mine may, at their own cost,

¹ Statutory Rules and Orders, 1909, No 516.

appoint and station one or more persons, whether holding the office of checkweigher or not, to be at the pithead, at all times when workmen are to be lowered or raised, for the purpose of observing the times of lowering and raising, and the provisions of the Coal Mines Regulation Acts, 1887 to 1905, relating to the checkweigher, and to the relations between the owner, agent, or manager of the mine and the checkweigher shall, so far as applicable, apply to any person so appointed as they apply to the checkweigher, with the substitution, as respects appointment, of the workmen in the mine for the persons who under those Acts are entitled to appoint a checkweigher.

(3) If any person knowingly makes a false entry in the register which is to be kept under this section, or knowingly causes or permits any such false entry to be made, he shall be liable on summary conviction in respect of each offence to a fine not exceeding five pounds. Provided that the total amount of fines for offences under this section committed by any one person at any one pithead in any one period of twenty-four hours shall not exceed twenty-five pounds

Register in prescribed form.—In *Roger v. Stevenson* [1913], S.C. (J.) 30, the manager of a colliery was convicted of failing to keep a register in the prescribed form and omitting to enter the cause of the men being below ground beyond the time fixed by the Act.

Checkweigher —For the provisions relating to checkweighers, see sections 13, 14 of the Act of 1887, pp 156–61, the Coal Mines (Checkweigher) Act, 1894, and the Coal Mines (Weighing of Minerals) Act, 1905, pp. 161–3.

3. *Power to extend hours of work on a limited number of days in a year.*—(1) The time fixed by this Act as the time during which the workmen in a mine may be below ground for the purpose of their work and of going to and from their work may be extended as respects any mine by

the owner, agent, or manager of the mine, on not more than sixty days in any calendar year by not more than one hour a day, and on any day on which an extension of time is made in accordance with this section as respects any mine the time as so extended shall be substituted for the purposes of this Act as respects that mine for the time as fixed by this Act

(2) The owner, agent, or manager of every mine shall cause a register to be kept in such manner as the Secretary of State may direct of the cases in which any extension of time has been given under this section, and the register shall be open to inspection by the inspector.

Extension of time of working—In *Robinson v. Insoles, Ltd*, 102 L T. 45 [1910], by virtue of an agreement between the owners and the men whereby the work should be carried on upon the terms and conditions of a contract known as the Conciliation Board Agreement, the manager gave notice that on two specified days the hours of working in the mine—namely eight hours—would be extended by one hour on each day. The workmen on each day refused to work the extra hour on the ground that such extra hour was not authorized by the Act. It was held by the Divisional Court that the time having been properly extended in pursuance of the Act, the extended time was to be substituted for the time as fixed by the Act, and therefore the extra hours were authorized by the Act within the terms of the agreement. In refusing to work the workmen had committed a breach of the agreement. It was assumed by the Court that the practice was not intended to be extended over the whole year, but was limited to the sixty days mentioned in the section.

4. *Power to suspend Act by Order in Council in event of emergency*.—His Majesty may, in the event of war or of imminent national danger or great emergency, or in the event of any grave economic disturbance due to the demand for coal exceeding the supply available at the time, by Order in Council suspend the operation of this Act to such extent and for such period as may be named

in the Order, either as respects all coal mines or any class of coal mines.

5 *Application to mines not entered by a shaft, etc*—In the application of this Act to mines which are entered otherwise than by a shaft, and to workmen who are not lowered to or raised from the mine by means of machinery, the admission of men to the mine shall be substituted for the lowering of men to the mine, and the return of men from the mine shall be substituted for the raising of men from the mine, and such times as may be determined by the owner, agent, or manager of the mine, with the approval of the inspector, as the times properly corresponding to the times fixed for the commencement and completion of the lowering and raising of workmen to and from the mine, shall be substituted for the times so fixed.

6. *Provisions for securing compliance with Act*.—For securing compliance with the provisions of this Act, it shall be the duty of the owner, agent, or manager of every mine—

- (a) to make regulations for that purpose and publish such regulations by posting them and keeping them posted at the pithead, and by supplying a copy thereof gratis to every workman employed underground in the mine who, not having been previously supplied with a copy, applies therefor at the office at which he is paid; and
- (b) to provide necessary means for raising the men from the mine within the time limited by this Act.

7. *Penalties*.—(1) If any person contravenes or fails to comply with any provision of this Act or connives at any such contravention or failure on the part of any other person, he shall be guilty of an offence against this Act.

Provided that a workman shall not be guilty of an

offence under this Act in the case of any failure to return to the surface within the time limited by this Act if he proves that without default on his part he was prevented from returning to the surface owing to means not being available for the purpose.

(2) A person guilty of an offence under this Act for which a special penalty is not provided shall, in respect of each offence, be liable, on summary conviction, if he is the owner, agent, or manager of the mine, to a fine not exceeding two pounds, and in any other case to a fine not exceeding ten shillings.

(3) If a workman is below ground for a longer period during any consecutive twenty-four hours than the time fixed by this Act he shall be deemed to have been below ground in contravention of this Act unless the contrary is proved.

8. *Application, commencement, and short title.*—(1) This Act shall, except where the contrary intention appears, apply to all mines to which the Coal Mines Regulation Acts, 1887 to 1905, apply.

(2) This Act shall come into operation, as respects mines in the counties of Northumberland and Durham, on the first day of January, nineteen hundred and ten, and elsewhere on the first day of July, nineteen hundred and nine.

(3) This Act may be cited as the Coal Mines Regulation Act, 1908, and shall be construed as one with the Coal Mines Regulation Acts, 1887 to 1905, and this Act and those Acts may be cited together as the Coal Mines Regulation Acts, 1887 to 1908.

Application of the Act—By section 126 (e) of the Act of 1911 the latter Act applies to offences, and other provisions of the Act of 1908 in like manner, as if they were offences against the Act of 1911, and expressions in these provisions have the same meaning as in that Act. (See p. 201.)

PROCEDURE AND COSTS OF REFERENCE ¹

REGULATIONS, DATED MAY 15, 1909, MADE BY THE SECRETARY OF STATE UNDER SECTION 1 (5) OF THE COAL MINES REGULATION ACT, 1908 (8 EDW. VII, c. 57)

1. The Inspector shall send to the owner, agent, or manager a statement in the prescribed form of the times approved by him under section 1 (4), and in the event of the owner, agent, or manager feeling aggrieved by the decision of the Inspector and desiring the matter to be referred to the decision of a person appointed by the Judge of County Courts or in Scotland by the Sheriff of the County in pursuance of section 1 (5), he shall give notice in writing of his objection to the Inspector within one week of the receipt of the Inspector's statement, setting out in the notice the specific grounds of objection and the modifications asked for.

2. On receipt of a notice of objection, the Inspector shall make application in writing to the Judge of County Courts for the district or in Scotland to the Sheriff of the County to appoint a referee, and shall forward to him copies of his statement and of the notice of objection.

3. The referee when appointed by the Judge or Sheriff shall at once serve notice by post on the Inspector and on the owner, agent, or manager of his appointment and of the time and place fixed by him for the hearing of the objection.

4. The time fixed by the referee for the hearing shall be not less than three days and not more than fourteen from the time of his appointment, and the place shall be at the mine, unless the Inspector and the owner, agent, or manager otherwise agree

5. The Inspector may appear at the hearing personally or by an Assistant Inspector. The owner, agent, or manager may appear personally or by an official of the mine. Neither party shall appear by solicitor or counsel.

A majority of the workmen employed underground at the mine may appoint any person, not being a solicitor or counsel, to represent them at the hearing, and any person so appointed

¹ S R O , 1909, No. 516.

may take part in the proceedings at the hearing in such manner as the referee may direct

6. The referee may examine the parties and any persons employed at the mine or tendered by the parties as witnesses, and may make such inspection of the mine as he may deem necessary.

7. The referee shall communicate his decision in writing to both parties as soon as possible after the hearing.

8. The remuneration of the referee shall if the hearing takes place at the mine be a sum of five guineas together with any expenses necessarily incurred for travelling; if the hearing takes place elsewhere, a sum of three guineas, provided that in any case of exceptional difficulty a special fee may be paid on the recommendation of the Secretary of State approved by the Treasury. The remuneration of the referee shall be payable in equal portions by the parties unless the referee otherwise direct on the ground that the objection was unreasonable, or on other special grounds to be stated by him in writing.

COAL MINES (MINIMUM WAGE) ACT, 1912¹

AN ACT TO PROVIDE A MINIMUM WAGE IN THE CASE OF WORKMEN EMPLOYED UNDERGROUND IN COAL MINES (INCLUDING MINES OF STRATIFIED IRON-STONE), AND FOR PURPOSES INCIDENTAL THERETO. [29TH MARCH, 1912]

1 *Minimum wage for workmen employed underground in coal mines*—(1) It shall be an implied term of every contract for the employment of a workman underground in a coal mine that the employer shall pay to that workman wages at not less than the minimum rate settled under this Act and applicable to that workman, unless it is certified in manner provided by the district rules that the workman is a person excluded under the district rules from the operation of this provision, or that the workman has forfeited the right to wages at the minimum rate by reason of his failure to comply with the conditions with respect to the regularity or efficiency of the work to be performed by workmen laid down by those rules; and any agreement for the payment of wages in so far as it is in contravention of this provision shall be void

For the purposes of this Act, the expression “district rules” means rules made under the powers given by this Act by the joint district board

(2) The district rules shall lay down conditions, as respects the district to which they apply, with respect to the exclusion from the right to wages at the minimum rate of aged workmen and infirm workmen (including

¹ 2 Geo. V, c. 2.

workmen partially disabled by illness or accident), and shall lay down conditions with respect to the regularity and efficiency of the work to be performed by the workmen, and with respect to the time for which a workman is to be paid in the event of any interruption of work due to an emergency, and shall provide that a workman shall forfeit the right to wages at the minimum rate if he does not comply with conditions as to regularity and efficiency of work, except in cases where the failure to comply with the conditions is due to some cause over which he has no control.

The district rules shall also make provision with respect to the persons by whom and the mode in which any question, whether any workman in the district is a workman to whom the minimum rate of wages is applicable, or whether a workman has complied with the conditions laid down by the rules, or whether a workman who has not complied with the conditions laid down by the rules has forfeited his right to wages at the minimum rate, is to be decided, and for a certificate being given of any such decision for the purposes of this section

(3) The provisions of this section as to payment of wages at a minimum rate shall operate as from the date of the passing of this Act, although a minimum rate of wages may not have been settled, and any sum which would have been payable under this section to a workman on account of wages if a minimum rate had been settled may be recovered by the workman from his employer at any time after the rate is settled.

Workman to whom minimum rate applicable.—In *Randle v. Clay Cross Co.* [1913], 3 K.B. 798, by rule 4 of the rules for the district of Derbyshire, made for the purpose of ascertaining what sum is due to a workman for any pay-week in respect of his right to wages at the minimum rate, regard was to be had to the amount of his actual earnings

during the period consisting of the pay-week in question and as few preceding pay-weeks as should be necessary to make up a period during which the colliery had worked not less than ten full days, provided that the period should in no case be longer than four pay-weeks in all. By rule 7, if any question should arise whether any workman in the district was a workman to whom the minimum rate of wages is applicable, the question was to be decided by the district board, or failing them by the independent chairman, and a certificate of the decision to be signed by the chairman, such decision to be final and binding.

After a strike of six weeks the defendants' colliery opened on 10 April, but for the pay-week ending 16 April the colliery worked only one day, and for the pay-week ending 23 April only five and a half days. The plaintiff claimed for the week ending 23 April the minimum rate of wages settled under section 1, viz £1 11s. 8d, whereas the defendants contended he was only entitled to 19s. 4d., the amount actually earned by him during that week. The plaintiff thereupon submitted the question to the joint district board. The board were unable to agree, and the independent chairman gave a certificate that, by reason of rule 4, the plaintiff was excluded from the operation of section 1 of the Act, and was not a workman to whom the minimum rate of wages was applicable in respect of the pay-week ending 23 April. The plaintiff thereupon sued in the county court to recover 12s. 4d, the difference between the minimum rate of wage and the amount actually earned by him.

It was held by the Divisional Court that rule 4 was not *ultra vires*, that the workman, not having complied with the conditions laid down by the rules, had forfeited his right to wages at the minimum rate, and a certificate to that effect having been duly given, the workman had no right to sue, since it was a condition precedent that he should have obtained a certificate deciding that he was a workman to whom the minimum rate of wages was applicable.

This principle was followed in *Fairbanks v. Florence Coal and Iron Co* [1914], 2 K B 461, where it was held that, although the rate of wages exceeded the minimum rate as settled under the Act, the case was within the Act. Consequently the workman had no right to sue until the complaint with regard to the regularity and efficiency of his work had

been adjudicated upon under the District Rules. Where there was no contract to pay wages between employer and workman it was held in *Richards v. Wrexham and Acton Collieries, Ltd.* [1914], 2 K.B. 497, that the Act did not create a contract where none existed independently of the Act.

Power of joint district board to make rules.—The purposes for which a joint district board are empowered under the Act to make general district rules do not include the provision of a method for ascertaining the actual daily earnings of the workmen.

In *Davies v. Glamorgan Coal Co.* [1913], 3 K.B. 222, Viscount St. Aldwyn, chairman of the joint district board for the South Wales district, had by his award settled the minimum rate of wages, fixed the standard rate of day wage for piecework, and made general district rules for the district. Of those, rule 7 provided that "in ascertaining whether the minimum wage has been earned by any workman on piecework the total earnings during two consecutive weeks shall be divided by the number of shifts and parts of shifts he has worked during two weeks." This rule was held not to be within the powers of the board, and was consequently void. This was upheld by the Court of Appeal [1914] 1 K.B. 674.

The employers, however, are, independently of the rules and by reason of the settled practice of paying wages at weekly or longer intervals, entitled, when paying the workman's wages, to consider what were his average daily earnings during the "pay" or period in respect of which wages were payable, whatever the length of the pay may have been; and if such average earnings exceed the minimum wage they are not bound to make any addition to his actual earnings in respect of any day in the pay on which they fell short of the minimum wage.

Inability of the workman to earn minimum wage owing to circumstances beyond his control.—Rule 5 of the same rules provided that, "If at any time any workman shall, in consequence of circumstances over which he alleges he has no control, be unable to perform such an amount of work as would entitle him, under the price list or other agreed rates, to a sum equal to the daily minimum rate, then and in such case he shall forthwith give notice thereof to the official in charge of the district in which he shall be engaged. . . .

If any workman shall act in contravention of this rule he shall forfeit the right to wages at the minimum rate for the pay in which such contravention shall take place "

This rule was held to be within the powers of the district board under subsection 2, "with respect to the regularity and efficiency of the work to be performed by the workmen " "It contributes," said Pickford, J, "to regularity and efficiency that a man should not be able to shirk his work and subsequently, at a time when the correctness of his statement cannot be tested, say that the reason why he did so little was that he was prevented by the conditions from doing more " This view was confirmed by the Court of Appeal [1914], 1 K.B. 674.

2 *Settlement of minimum rates of wages and district rules*—(1) Minimum rates of wages and district rules for the purposes of this Act shall be settled separately for each of the districts named in the Schedule to this Act by a body of persons recognised by the Board of Trade as the joint district board for that district

Nothing in this Act shall prejudice the operation of any agreement entered into or custom existing before the passing of this Act for the payment of wages at a rate higher than the minimum rate settled under this Act, and in settling any minimum rate of wages the joint district board shall have regard to the average daily rate of wages paid to the workmen of the class for which the minimum rate is to be settled.

(2) The Board of Trade may recognise as a joint district board for any district any body of persons, whether existing at the time of the passing of this Act or constituted for the purposes of this Act, which in the opinion of the Board of Trade fairly and adequately represents the workmen in coal mines in the district and the employers of those workmen, and the chairman of which is an independent person appointed by agreement between the persons representing the workmen and employers

respectively on the body, or in default of agreement by the Board of Trade.

The Board of Trade may, as a condition of recognizing as a joint district board for the purposes of this Act any body the rules of which do not provide for securing equality of voting power between the members representing workmen and the members representing employers and for giving the chairman a casting vote in case of difference between the two classes of members, require that body to adopt any such rule as the Board of Trade may approve for the purpose, and any rule so adopted shall be deemed to be a rule governing the procedure of the body for the purposes of this Act.

(3) The joint district board of a district shall settle general minimum rates of wages and general district rules for their district (in this Act referred to as general district minimum rates and general district rules), and the general district minimum rates and general district rules shall be the rates and rules applicable throughout the whole of the district to all coal mines in the district and to all workmen or classes of workmen employed underground in those mines, other than mines to which and workmen to whom a special minimum rate or special district rules settled under the provisions of this Act is or are applicable, or mines to which and workmen to whom the joint district board declare that the general district rates and general district rules shall not be applicable pending the decision of the question whether a special district rate or special district rules ought to be settled in their case.

(4) The joint district board of any district may, if it is shown to them that any general district minimum rate or general district rules are not applicable in the case of any group or class of coal mines within the district, owing to the special circumstances of the group or class of mines, settle a special minimum rate (either higher or lower than

the general district rate) or special district rules (either more or less stringent than the general district rules) for that group or class of mines, and any such special rate or special rules shall be the rate or rules applicable to that group or class of mines instead of the general district minimum rate or general district rules

(5) For the purpose of settling minimum rates of wage, the joint district board may subdivide their district into two parts or, if the members of the joint district board representing the workmen and the members representing the employers agree, into more than two parts, and in that case each part of the district as so subdivided shall, for the purpose of the minimum rate, be treated as the district.

(6) For the purpose of settling district rules, any joint district boards may agree that their districts shall be treated as one district, and in that case those districts shall be treated for that purpose as one combined district, with a combined district committee appointed as may be agreed between the joint district boards concerned, and the chairman of such one of the districts forming the combination as may be agreed upon between the joint district boards concerned, or, in default of agreement, determined by the Board of Trade, shall be the chairman of the combined district committee.

Ambiguous award.—Where a joint district board, under section 2 (3), made an award settling the minimum rate of wages in their district, and the award was expressed in ambiguous language, although there is no right of appeal from such award, it was held that under Order XXV, rule 5, it was competent for the High Court to construe the award to the extent of declaring the rights of the parties under that award. (*Lofthouse Colliery v. Ogden* [1913], 3 K.B. 120.) "In my view," said Bailache, J., "in matters within their powers under the Act, the decision of the joint district board, or of the chairman where there was disagreement, is not

open to review unless, possibly, where irregularity or misconduct is alleged and proved."

3. *Revision of minimum rates of wages and district rules.*—(1) Any minimum rate of wages or district rules settled under this Act shall remain in force until varied in accordance with the provisions of this Act.

(2) The joint district board of a district shall have power to vary any minimum rate of wages or district rules for the time being in force in their district—

- (a) at any time by agreement between the members of the joint district board representing the workmen and the members representing the employers; and
- (b) after one year has elapsed since the rate or rules were last settled or varied, on an application made (with three months' notice given after the expiration of the year) by any workmen or employers, which appears to the joint district board to represent any considerable body of opinion amongst either the workmen or the employers concerned;

and the provisions of this Act as to the settlement of minimum rates of wages or district rules shall, so far as applicable, apply to the variation of any such rate or rules.

4. *Provision for bringing Act into operation, &c.*—(1) If within two weeks after the passing of this Act a joint district board has not been recognised by the Board of Trade for any district, or if at any time after the passing of this Act any occasion arises for the exercise or performance in any district of any power or duty under this Act by the joint district board, and there is no joint district board for the district, the Board of Trade may either forthwith or after such interval as may seem to them necessary or expedient, appoint such person as they think fit to act in the place of the joint district board, and,

while that appointment continues, this Act shall be construed, so far as respects that district, as if the person so appointed were substituted for the joint district board.

The Board of Trade in any such case where it appears to them that the necessity for the exercise of their powers under this provision arises from the failure of the employers to appoint members to represent employers on a board when the workmen are willing to appoint members to represent workmen, or from the failure of the workmen to appoint members to represent workmen on a board when the employers are willing to appoint members to represent employers, may, if they think fit, instead of appointing a person to act in place of the joint district board, appoint such persons as they think fit to represent the employers or the workmen, as the case may be, who have failed to appoint members to represent them; and in that case the members so appointed by the Board of Trade shall be deemed to be members of the board representing employers or workmen as the case requires.

(2) If the joint district board within three weeks after the time at which it has been recognised under this Act for any district fail to settle the first minimum rates of wages and district rules in that district, or if the joint district board, within three weeks after the expiration of a notice for an application under this Act to vary any minimum rate of wages or district rules fail to deal with the application, the chairman of the joint district board shall settle the rates or rules or deal with the application, as the case may be, in place of the joint district board, and any minimum rate of wages or district rules settled by him shall have the same effect for the purposes of this Act as if they had been settled by the joint district board:

Provided that, if the members of the joint district board representing the workmen and the members representing the employers agree, or if the chairman of the

joint district board directs, that a specified period longer than three weeks shall for the purposes of this subsection be substituted for three weeks, this subsection shall have effect as if that specified period were therein substituted for three weeks.

5. *Interpretation, and provision as to chairman.*—(1)
In this Act—

The expression “coal mine” includes a mine of stratified ironstone ;

The expression “workman” means any person employed in a coal mine below ground other than—

(a) a person so employed occasionally or casually only ; or

(b) a person so employed solely in surveying or measuring ; or

(c) a person so employed as mechanic ; or

(d) the manager or any under-manager of the mine ; or

(e) any other official of the mine whose position in the mine is recognised by the joint district board as being a position different from that of a workman.

(2) If it is thought fit by any persons when appointing a chairman for the purposes of this Act, or by the Board of Trade when so appointing a chairman, the office of chairman may be committed to three persons, and in that case those three persons acting by a majority shall be deemed to be the chairman for the purposes of this Act.

6. *Short title and duration.*—(1) This Act may be cited as the Coal Mines (Minimum Wage) Act, 1912.

(2) This Act shall continue in force for three years from

the date of the passing thereof and no longer, unless Parliament shall otherwise determine.

Workman.—A filler or loader paid by a collier or contractor is a workman within the meaning of the Act, with rights and liabilities as between himself and the owner, with the exception of wages.—*Richards v Wrexham and Acton Collieries, Ltd.* [1914], 2 K.B. 497.

SCHEDULE ¹

DISTRICTS.

Northumberland.
 Durham.
 Cumberland.
 Lancashire and Cheshire.
 South Yorkshire.
 West Yorkshire.
 Cleveland.
 Derbyshire (exclusive of South Derbyshire).
 South Derbyshire.
 Nottinghamshire.
 Leicestershire.
 Shropshire.
 North Staffordshire.
 South Stafford (exclusive of Cannock Chase) and
 East Worcestershire.
 Cannock Chase.
 Warwickshire.
 Forest of Dean.
 Bristol.
 Somerset.
 North Wales.
 South Wales, including Monmouth.
 The mainland of Scotland.

Where a mine, though situate in one of these districts, has for industrial purposes been customarily dealt with in the same manner as a mine situate in an adjoining district, that mine shall for the purposes of this Act be treated as situate in the latter district, if the joint district boards of the two districts so agree.

APPENDIX

LIST OF PERMITTED EXPLOSIVES

BY the Explosives in Coal Mines Order of the 13th May, 1914,¹ the use of "Uplees Powder" is prohibited and the following added to the list of permitted explosives, viz :—
Ammonite No. 4, Anchorite; A 1 Monobel; Denaby Powder; Roburite No. 4; and Victor Powder.

The following is a complete list of the Permitted Explosives.—

(Explosives which have passed the Rotherham Test.)

Abelite No. 1	Melling Powder
Ajax Powder	Monarkite
Ammonite No. 2	Monobel No. 1
Ammonite No. 3	Negro Powder No. 2
Ammonite No. 4	Neonal
Anchorite	New Fortex
A 1 Monobel	Nitro-Densite
Arkite No. 2	Permon Powder
Bellite No. 2	Pit-ite No. 2
Bellite No. 4	Pitsea Powder No. 2
Britonite No. 2	Roburite No. 4
Cambrite	Sunderite
Denaby Powder	Super-Curtisite
Dreadnought Powder	Super-Excellite
Duxite	Super-Excellite No. 2
Dynobel	Superite
Essex Powder	Super-Kolax
Expedit	Super-Kolax No. 2
Faversham Powder No. 2	Swale Powder
Haylite No. 1	Syndite
Kentite	Tutol No. 2
Kent Powder	Victor Powder
Kynarkite	Westfalite No. 3

¹ Statutory Rules and Orders, 1914, No. 678.

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